Gulstonian Lectures
ON
MALIGNANT ENDOCARDITIS.

Delivered at the Royal College of Physicians.

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LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—It is of use from time to time to take stock, so to speak, of our knowledge of a particular disease, to see exactly where we stand in regard to it, to inquire to what conclusions the accumulated facts seem to point, and to ascertain in what direction we may look for fruitful investigations in the future. With your permission, Sir, I propose to do this in the case of that most interesting disease generally known as ulcerative endocarditis, a disease the phenomena of which were first clearly explained by the late Dr. Kirkes, from whose investigations in 1851-52 we date our accurate knowledge of the affection. Some of those who listen to me to-day can doubtless recall, and recall with pleasure, the Gulstonian Lectures of 1851, in which Dr. Ormerod dealt so fully and so ably with valvular affections of the heart; but a reference to them will show how much the past twenty-five years have done to widen our view of cardiac disease, more particularly in regard to the effects of emboli and the association of valvular inflammation with grave constitutional disorder, and the probable connexion of the disease with the presence of micro-organisms. By the labours of Drs. Ogle, Wilks, Simpson, Moxon, Bristowe, and others in this country, of Charcot, Vulpian, and Lancereaux in France, and of Virchow and a host of observers in Germany, a large amount of material has been accumulated, and we may assume that the etiological, clinical, and anatomical characters of the disease have been fairly well ascertained, and that we have got about as far towards a full knowledge of the affection as the ordinary means at our disposal will permit. The inquiry now enters upon another stage, and it remains for experimental investigation to determine, if possible, the relation of the endocarditis to those diseases with which it is most frequently associated. This being the case, the present time has seemed to me a favourable opportunity to summarise our knowledge to date, and for this purpose I have reviewed the records of over two hundred cases, which, from the description of the symptoms and lesions, were evidently of the type of malignant endocarditis; and these, with the considerable experience I have had at the General Hospital at Montreal, may perhaps enable me to give a somewhat more comprehensive account, in some respects, than has yet been attempted.

In discussing the subject of endocarditis we are met at the outset by difficulties of nomenclature and classification. The designation *acute* may be used to indicate those forms which are accompanied by proliferation of and exudation upon the endocardial surface, with or without loss of substance, as opposed to *chronic*, in which there are sclerotic changes without vegetations. Subdivisions of the acute form have been arranged on an anatomical basis as the terms *plastic*, *papillary*, *verrucose*, *fungous*, *ulcerative*, indicate. On the other hand, from an etiological point of view, the forms of endocarditis are as numerous as the diseases in which it occurs, and we constantly hear the expressions *puerperal*, *rheumatic*, *scarlatinal*, &c. Some speak of primary and secondary forms, while from a clinical standpoint they are arranged in two classes, simple and grave. Anatomically there appear to be no very essential differences in the various forms of acute endocarditis. Between the small papillary excrescence and the huge fungating vegetation with destructive changes all gradations can be traced, and the last may be the direct outcome of the first; the two extremes indeed may be present in the same valve. They represent different degrees of intensity of one and the same process. A classification of cases based on the ordinary macroscopic characters of the inflammatory products into warty or verrucose and ulcerative will in many instances group together cases widely different in their clinical aspects, and, contrariwise, a clinical subdivision into cases of simple and cases of malignant endocarditis by no means of necessity implies that the lesions in the former case are all of the plastic or warty variety, and in the latter of the ulcerative or destructive. The term *ulcerative* has come into very general use to describe the grave form, and it expresses well an anatomical feature present in a large proportion of cases; but in others it is very inapplicable, as there may be no actual loss of substance, and no more destruction than occurs in the verrucose form; and, on the other hand, there may be great destruction and ulceration from causes of an entirely different nature. The numerous other terms employed, *septic*, *infectious*, *diphtheritic*, *mycosis endocardii*, *arterial pyæmia*, while each expressing some special feature, and so far suitable, have never come into very general use. On the whole, it seems to me that the names *simple* and *malignant*, which we use so often to separate the milder and severe forms of many diseases, might appropriately be employed in describing the cases of acute endocarditis; the *simple* being those with few or slight symptoms, and which run a favourable course; the *malignant* the cases with severe constitutional disturbance and extensive valve lesions, whether ulcerative or vegetative, the term being more clinical than anatomical.

Malignant endocarditis occurs under the following conditions:—1. As a primary disease of the lining membrane of the heart or its valves, either attacking persons in previous good health or more often attacking the debilitated and dissipated or those with old valve lesions. 2. As a secondary affection in connexion with many diseases, particularly rheumatic fever, pneumonia, scarlet fever, diphtheria, ague, &c. 3. As an associated condition in septic processes, traumatic or puerperal. We shall discuss first the anatomical characters, then the clinical features, and lastly the etiological and pathological relations.

The lesions of malignant endocarditis are by no means uniform, and may be vegetative, ulcerative, or suppurative; and these various forms may occur alone or in combination. The belief that there is always ulceration has led to some confusion; and we must recognise that there are cases with the clinical history of the malignant form in which, post mortem, the valvular condition has been that of a severe vegetative or verrucose endocarditis. Such a case was a lad aged eleven, a patient of Dr. Molson's, from whom I obtained the specimen which I pass round. He had chorea in July, 1880, the second attack. Rapid improvement and recovery under Fowler's solution, five minims every four hours hypodermically, took place. There was a slight murmurish condition of the first sound. When seen again on March 3rd, 1881, the chorea had returned, having begun ten days before. The patient improved until the 10th, when he began to get feverish; had exacerbations each evening; temperature rising to 104° F. He became unconscious. There was slight paresis of the left side, and death took place on the 16th. The temperature on the 15th was nearly 106°. There were irregular, soft, greyish-white vegetations on the mitral valve, infarcts in spleen and kidneys, and a small spot of red softening in the right corpus striatum. These photographs from a case of Dr. Musser's illustrate a more advanced condition of the same kind; the vegetations were larger, more abundant, and some were a little irregular and soft on the surface, but unless a mass was removed no actual loss of substance was seen. Even in the smallest vegetation there is some destruction of endocardial itssue, if only of the endothelium and superficial layer, while the larger outgrowths are more deeply set in the valve, or may involve the entire thickness. More commonly with or without vegetations there is ulceration, the frequency of the occurrence of which has given the name most often attached to this form of endocarditis. The loss of substance may be superficial, involving only the endocardium, or it may be deep and destructive, leading to perforation of a valve, of the septum, or of the heart itself. On the valves extensive outgrowths usually accompany the process, and may conceal the ulcer or project as fungating masses from its edge, as is well illustrated by this coloured drawing. In many instances the process appears simply ulcerative, without any vegetations to speak of. In the slightest form only a superficial abrasion exists, perhaps scarcely recognisable, in others a process of erosion may go on by which half a valve may be destroyed, or there may be (as shown in this drawing) a deep excavation extending beyond the valves and destroying the muscle substance of the heart, leading to

perforation of the septum or of the wall of the ventricle. These are well-known features, however, upon which I need not dwell. In two instances I have seen superficial necrotic changes without ulceration or vegetations, circumscribed patches, the size of a sixpence, opaque yellow-white in colour, resembling the necrotic pleura, over a pyæmic infarct of the lung or portion of dead peritoneum at the base of a deep typhoid ulcer. Doubtless these would in time have formed ulcers. I find this condition noted by one or two observers. Lastly, the process may be suppurative, in which case the deeper tissues of the valve appear first involved and the endocardium only implicated by contiguity. The occurrence of small abscesses at the base of extensive vegetations is not uncommon, but there are also instances in which the suppuration seems the initial step. The combination of ulcerative and fungating outgrowths is perhaps the most common condition. The vegetations vary a good deal in appearance and consistence. Soft greyish-white masses with roughened friable surfaces, to which thin blood-clot adheres, are numerous; or there may be large cauliflower excrescences with deep jagged fissures; or, again, long pendulous stalactitic masses. In the latter form we often see, as Dr. Moxon pointed out, the effects of friction, and such a long vegetation from an aortic cusp may produce by contact a whole series of smaller outgrowths along the ventricular wall. The pressure of the valves against each other and the action of the blood tends to loosen and break the vegetations, and one can sometimes see where masses have been torn off either entire or by a gradual process of disintegration. Considering the force with which the valves come together it is curious that the soft vegetations, occupying as they generally do the lines of closure, can resist the constant compression to which they are subjected. Some vegetations present a remarkable greenish-grey or greenish-yellow colour. Changes in a conservative direction may go on when the disease is much prolonged. Fibroid induration may take place in the deeper parts, while the superficial portions remain unchanged and necrotic, perhaps also getting a little harder and shrinking. Such a process can be seen in this specimen of endocarditis from an ox, in which there were most extensive vegetative and destructive changes. Not unfrequently the vegetations are gritty from the deposit of lime salts, which may take place in very acute cases, and is not necessarily an indication of age. It is interesting to note how often inorganic material is deposited in the neighbourhood of micro-organisms, as here on the endocardial outgrowths, in the tonsillar crypts, and about the tufts of actinomyces. Two conditions must be distinguished from the lesions of malignant (mycotic) endocarditis: the atheromatous degeneration in sclerotic valves, which leads to ulceration and extensive destruction of segments; a process which has nothing in common, except in its effects upon the valves, with the acute ulcerative changes above described, but is similar to the atheromatous processes in the aorta. It must not be forgotten, however, that an acute mycotic process may be engrafted, and indeed often is, upon old sclerotic valves, the seat of atheromatous changes. The firm white globular thrombi of the auricular appendices and of the interstices of the columnæ carneæ of the ventricles have sometimes an appearance closely resembling endocardial outgrowths, and when softened in the centre and ruptured the resemblance may be very close indeed. It is possible that the granular débris of an atheromatous abscess or a softened thrombus may possess irritating properties when discharged into the blood.

Histological characters.—The study of a small fresh endocardial vegetation shows it to be made up of cells derived from the subendothelial layer, round and fusiform, which by their proliferation have produced a small nodular projection on the surface of the endocardium. Varying with the rapidity of the growth, the mass will present the characters of a soft granulation tissue or a tolerably firm fibrous outgrowth. Usually the round cells predominate, but there may be many elongated, spindle-formed cells with three or four processes. What part the endothelium plays in this growth has not been determined. Tiny outgrowths may be seen in which the process appears to be entirely subendothelial, but usually before the mass attains any size the smooth surface is lost, and there is deposited upon it a cap of fibrine in the form of a granular, sometimes stratified, material, of variable thickness. Though this resembles an ordinary coagulable exudation, it is probably deposited directly from the blood, and is of the nature of a thrombus. Upon and in this layer may be found, sometimes in large numbers, those remarkable little bodies which have so long been known, when collected together, as Schultze's granule masses, and which have of late become so prominent as the blood-plates of Bizzozero and the hæmatoblasts of Hayem. Occasionally they are very abundant, and I have seen soft warty vegetations composed (superficially) in great part of them. As their connexion with endocardial and endarterial outgrowths has not, so far as I know, been referred to, I may be permitted to call attention to these two drawings, which further illustrate this point. The first represents the aorta from an old man dead of carcinoma, in which just above the bifurcation three irregular masses are shown, one nearly an inch in length, which projected fully a quarter of an inch from the intima of the vessel. They were attached to atheromatous ulcers, were soft greyish-white in colour, and were composed exclusively of the elements of Schultze's granule masses, with fibrine fibrils, and here and there a few white corpuscles. The second drawing illustrates a small aneurysm of the aorta, which has perforated the œsophagus. On the wall of the sac the artist has represented a number of irregular whitish lines, which were narrow elevated ridges, also made up microscopically of these small discoid elements, the connexion of which with fibrine formation has been so strongly insisted upon by Bizzozero. Scattered in and beneath the fibrinous exudation are numerous small granular bodies, which have the appearance and reaction of micrococci.

The larger vegetations, more characteristic of malignant endocarditis, consist of a granular material composed of altered and dead tissue elements, fibrinous exudation, and colonies of micrococci; the deeper parts present the appearance of a granulation tissue, while at the attachment in the valve there is always more or less infiltration and increase of the cell elements. The granular substance is structureless, and resembles diphtheritic exudation, the resemblance at times being so close that one can readily understand the application of the term "diphtheritic" to the inflammation. It may be distinctly laminated, and with a high power fine filaments can be seen, though usually the granules conceal all appearance of structure. Strands of translucent material may occur throughout the mass, as if portions had undergone a sort of hyaline transformation. In some instances this is very marked. Pale spheres filled with granules also occur, and may be very abundant. They have been described as colonies of micrococci, but some regard them as altered endothelial elements. I have seen them too numerous to be explained on this view. At the attachment of the vegetation there is a zone of tissue deeply infiltrated with leucocytes, and deeper still the tissue elements of the valve present an increase of nuclei and cells. The destruction of tissue appears to result in two ways: first, a gradual extension inwards of the necrotic process, doubtless induced by the micrococci; secondly, the softening and separation of valve tissue caused by the rapid development of leucocytes at the base of the vegetation.

The micrococci are constant elements in the vegetations. All granules of a uniform size met with in the sections are not micro-organisms, nor, indeed, are all which stain by some methods recommended for the detection of these bodies. By far the most satisfactory method is that of Gramm,[1] in which the section, after staining in gentian violet, is transferred for a few minutes to a dilute solution of iodine and iodide of potassium, and then to the alcohol, when it is found that the colour has been extracted from all tissue elements and nuclei, leaving only the micro-organisms stained. They vary a good deal in number and arrangement, and may be scattered singly in the granular substance or arranged in groups. They are usually very numerous at the deeper part of the vegetations, just where the structureless material joins the granulation tissue, and they may penetrate deeply into the substance of the valve. Sometimes the smaller vegetations seem made up exclusively of them. Several of my specimens appear to confirm the view of Klebs,[2] that the micrococci lodge first on the endocardium and penetrate into the substance, often as distinct columns. In their immediate vicinity there is a zone of necrosis, and beyond this an accumulation of leucocytes and signs of reactive inflammation. The micro-organisms found in connexion with the malignant endocarditis are not all of the same kind. Klebs distinguishes two forms, one met with in

[1] Fortschritte der Medicin. Berlin, Bd. i.
[2] Archiv. f. Experiment. Pathologie, Bd. vi.

septic, and the other in rheumatic, cases. In some instances the micrococci are all arranged in zoogloea-like masses, in others, particularly the septic cases, they are in chaplets. Some present distinct capsules. Small elongated bacilli have also been found; I have seen them in one instance—short, stout rods often joined in pairs. Delafield and Prudden[3] have recently noted the presence of bacilli in the vegetations of a very acute case of malignant endocarditis. Cornil, in a recent lecture,[4] stated that the bacillus tuberculosis had been found in the vegetations on the valves in cases of phthisis, and expressed the opinion that before long we should have accurate knowledge of a variety of micro-organisms in endocarditis depending upon the nature of the primary disease. By culture experiments alone can we hope to have the question settled.

The following figures give an approximate estimate of frequency with which different parts of the heart are affected. The aortic and mitral valves were affected together in forty-one cases, the aortic valves alone in fifty-three, the mitral alone in seventy-seven, the tricuspid in nineteen, the pulmonary valves in fifteen, and the heart-wall in thirty-three. The right heart is rarely affected alone, in only nine instances, in which five the tricuspid and four the pulmonary valves were involved. The valves are most often attacked along the lines of closure, as in the simple endocarditis, the auricular faces of the mitral flaps and the ventricular surfaces of the aortic cusps suffering most severely. Mural endocarditis is most often seen at the upper part of the septum of the left ventricle, just below the aortic ring, in which situation some of the most extensive and deep cardiac ulcers occur, leading to perforation of the septum. Next in order is the endocardium of the left auricle on the postero-external wall, as noted by Lepine.[5]

The local effects of the ulcerative changes are important. Perforation of a valve segment is extremely common, sometimes there is a clean-cut punched-out hole with scarcely any irregularity of the edges; more frequently, however, there are great fungous vegetations which completely close and conceal the perforation. Erosion of the chordæ tendineæ is frequently met with, and an entire group passing to the papilla may be destroyed, the ends curled and encrusted with vegetations. Ulceration of the heart muscle leading to perforation of the septum or of the wall of a chamber is a much less frequent occurrence. I have collected notes of eleven instances; three of the septum close to the aortic ring. Ulcers at the aortic ring perforated the left auricle in three instances, the right auricle in one and the right ventricle in one. In a remarkable case of Dr. Stephen Mackenzie[6] the left ventricle was perforated by an ulcer at the apex. In a case of Dr. Curnow[7] the ulceration extended between the coats of the aorta, and then perforated into the lumen of the vessel, and in one of the Montreal cases there was perforation of an aneurysm of the aorta by ulceration, an instance of extensive ulcerative endarteritis with the production of multiple aneurysms. Another common result of ulceration is the production of valvular aneurysm. The anterior flap of the mitral is most frequently affected, and then the aortic cusps. In the records of the cases which I have reviewed I was surprised not to find this condition noted oftener, only in about 12 per cent. of the cases; but in very many cases the record of the anatomical condition was meagre. I shall not refer further to this interesting point, as Dr. Legg has dealt with it very fully in a recent lecture at this College.[8] I may observe, however, that the atheromatous ulceration is also a frequent cause of aneurysm of the valves.

It was Sir James Paget,[9] I think, who first referred to the frequency with which sclerotic and malformed valves are attacked by acute disease. Chronic valvulitis is met with in a large number of cases of malignant endocarditis. The records which I have examined give only a percentage of about twenty-five, but the condition of the valves, except as regards ulceration, was often omitted, and this represents a very much smaller percentage than actually occurs. In more than three-fourths of the Montreal cases sclerotic changes were present, and Dr. Goodhart found[10] in a series of sixty-nine cases that sixty-one presented old thickening of the valves. In very many of the cases the condition of fusion of two of the aortic cusps was present. This abnormality is almost invariably accompanied by sclerotic changes, and to the existence of these is probably due the frequency with which they are attacked by ulceration. In seventeen instances of fusion of two of the aortic cusps of which I have notes there were ulcerative changes in eight, in two or three of an atheromatous nature.

In a few instances the aorta is involved with the heart. The most frequent site is the sinuses of Valsalva, the vegetations growing through the segments spread on to the aortic wall, or it is affected by friction. It is rare for the vegetations to extend into the arch. I have met with one remarkable instance of ulcerative endocarditis in which there was also ulcerative endarteritis, involving the arch and producing multiple aneurysms. The specimen which I here demonstrate was taken from a man aged about thirty, who had been the subject of syphilis and was known to have had aortic incompetency for some time. He was admitted to the General Hospital, Montreal, on June 4th, 1880, with diarrhœa, chills, headache, cough, and fever. Temperature 104°. There were signs of pneumonia at the left base. He became delirious, a low typhoid condition supervened with chills at intervals, and death took place on July 1st. The aortic valves were curled and hard, and presented extensive recent vegetations, the arch of the aorta presented four aneurysms, three small, not larger than cherries, and one the size of a billiard ball. The small ones were not noticeable as aneurysms from the internal surface, but presented the appearance of fresh fungous vegetations, on separating which little slits could be seen leading to saccular dilatations of the middle and outer coats. The large aneurysm was thin-walled with no laminated fibrine, and presented at the edges of the orifice and over the whole lining membrane of the sac many greyish-green vegetations, some of which had perforated the sac and caused a rupture into the pericardium. It may be presumed that in this instance the ulcerations led directly to the production of the aneurysms, certainly in the case of the smaller ones; and the larger sac presented a condition of mycotic endarteritis unique in my experience of aortic aneurysms.

Of associated pathological changes we have, in the first place, those connected with some primary disease, to which the endocarditis is in the majority of cases secondary. Thus, in the endocarditis of septic processes there is the local lesion, a suppurating wound, a phlegmonous inflammation, or puerperal processes of a septic nature. In a very considerable proportion of cases there is evidence of recent pneumonia, in others rheumatic affections of joints, and in a few diphtheritic processes. In the group of primary cases the lesions are entirely those of endocarditis, local and general. In the second place, there are the extensive pathological changes due to embolism, and these constitute interesting features in the disease, and may produce a very great variety of lesions in every portion of the body. I do not propose to deal very fully with these, but to call attention only to some special points. The cases may be divided into those without any embolic processes, cases in which the infarcts are simple, not suppurative, those in which there are innumerable suppurative infarcts, and cases in which some of the infarcts are simple and some suppurative. It is remarkable how variable these embolic features are. They may be entirely absent in well-marked malignant cases. They are not necessarily associated with suppuration; indeed, in a very considerable number of cases they present the characters of ordinary hæmorrhagic infarcts, but in the traumatic and puerperal cases the infarcts are invariably septic. They may be few in number, only one or two perhaps in the spleen or kidney, or they may be in thousands throughout the various organs of the body. When suppurative, micrococci, in my experience, are always present; but the micrococci may exist in the vessels without inducing this change. In severe forms of the disease hæmorrhages are very frequent upon the skin, serous and mucous surfaces. The cutaneous ones will be referred to again in connexion with the symptomatology. They appear, in many instances, to be due to the effect of the poison, just as in other infectious diseases; in others they are undoubtedly embolic, and a minute necrotic or suppurative centre can sometimes be seen. In the membranes of the brain I have twice met with extensive superficial extravasation. Litten[11] has called attention to the frequency of retinal hæmorrhages, particularly in the endocarditis of puerperal sepsis. In some instances, there are innumerable miliary

[3] Text-book of Pathological Histology, New York, 1885.
[4] L'Abeille Médicale, No. 51, 1884. [5] Bull. Soc. Biologie, 1869.
[6] Pathological Society's Transactions, vol. xxxiii.
[7] THE LANCET, vol. i., 1883. [8] Bradshawe Lecture, 1882.
[9] Medico-Chirurgical Transactions, vol. xxvii.
[10] Pathological Society's Transactions, xxxiii.
[11] Charité Annalen, iii., Berlin.

abscesses, more particularly in the heart and kidneys. They are often associated with hæmorrhage, and the smaller ones look like little extravasations, but the presence of micrococci and suppuration can be easily determined in stained sections. The spleen is most often the seat of infarction, and next in order the kidneys. The lungs are usually affected when the endocarditis is on the right side, and there may be suppuration or even extensive gangrene, but even with destructive lesions of the pulmonary valves there may be no suppurative infarcts in the lungs, as in a case of Dr. Church.[12] Or again, as in a case of Dr. Moxon's,[13] there may be with aortic valvulitis suppurative infarcts in the lungs, and simple ones in the other organs. The gastro-intestinal canal may present very remarkable changes, due to the presence of numerous infarctions, from the size of a pin's head to a split pea. They are slightly elevated, greyish-yellow in colour, often surrounded by a zone of deep congestion or extravasation, and on section may show a suppurative centre. Micrococci are present as in other miliary abscesses, and in several instances I was able to find small embolic plugs in the arteries of the submucosa. The abscesses may discharge and leave a small ulcerated surface. In the stomach there may be similar minute infarcts, and occasionally larger ones. Carrington[14] has described a remarkable case in which there was a gastric ulcer, apparently due to embolic process, in a case of severe endocarditis; and Magill,[15] a case in which the stomach was intensely inflamed, the mucous membrane at the greater curvature being black, almost gangrenous. The liver may present minute abscesses, and in a number of cases in which there has been jaundice degeneration of the cells has been observed.[16] The serous surfaces are often inflamed, pleurisy and pericarditis being not uncommon complications. The pericardium is most frequently affected in rheumatic cases in which endocarditis and pericarditis may occur simultaneously. Pleurisy is met with chiefly in connexion with the traumatic and puerperal cases, and also with pneumonia, which, as I shall show, plays such an important part in the history of this form of endocarditis. The cerebral lesions are of the substance and of the membranes. Embolic softening, simple or suppurative, is extremely common, and in very many cases head symptoms supervene and there is paralysis of one side or the other. There may be a single embolus, producing extensive suppuration or red softening, or there may be multiple infarcts in various regions.

The meningeal complications of endocarditis have not received much attention. Considering the frequency with which it has occurred in the Montreal cases, five instances out of twenty-three, I was quite prepared to find such a large number as twenty-five cases—i.e., somewhat over 12 per cent. In the majority of these cases it occurred in connexion with pneumonia. It is almost always cortical, but many extend to the base and involve the nerves, leading in one case, which I saw with Dr. Ross at the Montreal Hospital, to strabismus, and also to ulceration of the cornea from involvement of the fifth nerve. In rare instances the spinal meninges are involved, and the clinical picture may be that of an acute cerebro-spinal meningitis.[17] Acute suppurative parotitis was noted in three cases.

THE DIET OF THE FEBRILE STATE.[1]

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THE search for a perfect diet has been an object of solicitude and study from the earliest times, to the physician and the quack, to the learned and the empiric. From the resulting mass of crude suggestion and ignorant assertion it may not be said that we have gained no positive knowledge, but we should still be far from stating that the principles of dietetics have been reduced to a certainty. To the already vast literature of this subject, the dietetics of health, I have no present intention of adding, but I propose to direct attention to the question of the fitting diet for the febrile state, a morbid condition of the body which is of the commonest occurrence, and which, as affecting the system generally, may be placed in contrast to that other general state of body we denominate "health."

The problem to the solution of which I am desirous of contributing is that we should aim as far as possible at formulating some general scheme for a febrile diet, to be modified as special cases—e.g., enteric fever—may demand, just as the usual diet of health is modified in certain persons. Clearly, to lay down such a scheme, the principles of a normal diet no less than the nature of the febrile state should be first considered.

Regarding the diet of the healthy state, though much still remains *sub judice*, the profession has succeeded in ascertaining a very definite and useful series of data, that we are accustomed, and I believe with good reason, to accept as true. The one that mainly concerns us is that the essentials of a healthy diet must correspond with the component materials of the body, or, in other words, that the alimentary principles of food must correspond with the proximate principles of the human tissues; and further, that, speaking generally, they should be combined in the following proportions:—

Proteids	4½ ounces	Free from water.
Hydrocarbons ...	3 „	
Carbohydrates ...	14 „	
Salts	1 „	
Water	100 fluid ounces.	

That is to say, for an average adult with average exercise of mind and body. We have further learned that we cannot sacrifice *one* of these substances without doing harm; all must be present, and though of course it would be practically impossible to maintain existence on these crude principles, they nevertheless are the important essential components of the various articles of diet that form the food of mankind. Since no single article of diet contains the necessary alimentary principles in the proportions required for an adult, they have to be distributed among the various food stuffs in such a way as to furnish the desired amount. Doubtless we are in the habit of exceeding the absolutely necessary quantity, and the effect and destination of our surplus ingesta is a question of the greatest interest, both in health and disease, though apart somewhat from the present subject. It is further significant that a monotonous adherence to a diet, however complete, is insupportable, and results in starvation, though some articles of food are capable of being longer tolerated than others. It is interesting and pertinent to the question to note how these data were arrived at. The quantity and quality of the alimentary principles may be said to have been determined partly by the experience of mankind based upon instinct, but more recently by the accurate methods of tissue analysis, which demonstrates the structures which have to be repaired, and the excreta analysis, which equally shows what has to be supplied to make good the deficit and maintain the balance. I shall have occasion to consider how these methods are further applicable, or indeed have been applied to the subject in hand. But, however exact we may in time come to be in our results, however accurately we may demonstrate the nature and source of the excreta, and thence with equal certainty define the requisite ingesta, there will still remain a factor with which we must cope, and which has been termed "idiosyncrasy." There can be no doubt that a very considerable difference exists between what may be termed a theoretically perfect diet and the diet which best suits a given individual; and I think Dr. Austin Flint has done good service in drawing attention to the harm that may be done from a too rigid adherence to a presumed scientific dietary based on chemical analysis, to the exclusion of what appetite, experience, both personal and general, and common sense would dictate.

A further consideration preliminary to my subject is the destination of such a diet as I have mentioned; in short, the need for the food, or the object of its ingestion. That the energies manifested by a living being are the resultant of an alteration in the physico-chemical condition of some of the materials of its structure is now regarded as an axiom; and it necessarily follows therefore that, if the manifestation continue, the material, to changes in which it is due, must be as continually renewed. Hence, we are in the habit of saying that our need for food is to repair the tissue consumed in the production of living energy. The distinctive forms of energy that characterise living beings, and that in

[12] Path. Soc. Trans., vol. xxvi. [13] Ibid., vol. xix.
[14] THE LANCET, vol. i., 1884. [15] Brit. Med. Journal, vol. ii., 1884.
[16] Schnitzler, Wiener Med. Presse, 1865.
[17] Humolle, Bull. de Soc. d'Anatomie, 1874; and Heineman, Med. Record, New York, vol. ii., 1881.

[1] A paper read at the annual meeting of the Medical Society of London, March 2nd, 1885.

our present state of knowledge are not regarded as correlated to the physical forms of force, however much they may come to be shown to be but "modes of motion," are muscular force or contractility, nervous irritability, and gland force. An arrangement of tissues and organs that liberates these is undoubtedly living and probably an animal. But be it observed that in addition to these, heat and electricity are evolved at the same time, and these are precisely identical in nature with the same named forces that we can develop from non-living material. The exact relationship of animal heat to the producing organism needs to be set forth. It is well-known that the tissue metabolism underlying the manifestation of the vital energies above mentioned is invariably accompanied by a rise of temperature; the contractions of the muscles are associated with heat production, the secretion of glands the same to a less extent, the activity of nervous tissue to a still less degree, and an infinitely small amount of heat is liberated by the slight changes in the protoplasmic constituents of the connective tissues. Observations and analysis have shown that muscular contractility, and almost as certainly nervous energy, are not produced at the expense of the actual nitrogenous constituents of muscle and nerve cell, since the resulting nitrogenous waste is not proportioned to the work done; but in all probability they are due to the oxidation of some hydrocarbon material intimately involved and incorporated with the protoplasmic substance, the latter suffering a wear and tear (also in the nature of oxidation) comparable to that of the bars of a furnace, the fuel contents of which are the actual source of the heat produced. In accordance with this view the oxidation of the hydrocarbon included in the muscular fibre results in the liberation of a form of energy which, under the influence of the complex, unstable, nitrogenous protoplasm, is translated into what we call "muscular contractility;" but at the same time there is evolved a certain amount of heat, also due to the oxidation of the same material. The heat, then, is an accompaniment, or bye-product, of the same process, and may be produced at the expense of so much muscular energy, just as in mechanical arrangements heat is developed by friction in the operation of the various parts, often at a positive detriment to the total result, and certainly not being the object for which the machine is worked. The other aspect of the relationship of the animal heat to the body is that for the manifestation of the activities of the living tissues a certain temperature is necessary, since many chemical decompositions will only take place under the influence of heat. This obviously is, if I may so say, the necessity for the body temperature, and the question at once arises whether the total quantity of heat requisite for this purpose is derived from the metabolism of muscular, glandular, and nervous tissue (including therein the extremely small increment derived from the oxidation of the protoplasmic structure); or whether there be any special combustion of certain of the ingesta for heat-production only, and if so where may this take place? The general opinion would seem to be that the heat under conditions of health is derived entirely from the tissue disintegration accompanying the liberation of the specific vital energies. There is not much doubt that the destination of the various fat, sugar, and starch ingesta is to maintain the supply of the hydrocarbon material by the oxidation of which the living energies and the heat of the body are produced. There is good reason to suppose that the carbohydrates ultimately reach the site of their combustion as hydrocarbons, although the exact chemical steps of the conversion are as yet unknown. Nor are these thought to be the sole sources of the fuel. It is very generally believed that only a small portion of the total nitrogenous ingesta is ultimately concerned in the restitution of the protoplasmic waste; in fact, that far more proteid material is taken as food than is actually required to make good the proteid decomposition, although on grounds of experience, and for other reasons, such an amount as that above stated is found most suitable. The excess of such substances in all probability undergoes a decomposition, perhaps in the liver, which results in the formation of some carbohydrate (glycogen) or fat, leaving a nitrogenous residue akin to urea, which is excreted, the other directly or indirectly helping to furnish that hydrocarbon which is oxidised in association with the living tissue. Among the many interesting questions which surround this part of the subject, I might mention the value of the nitrogenous ingesta apart from their constructive function, as seen in the influence they exert over fat accumulation, and the exceedingly important inquiry as to the existence and conditions of the "reserve pabulum." With such a conception of the relation of the energies produced to the tissues of the body, it only remains for me say that calculated upon the waste resulting from the disintegration of these tissues, as excreted by kidneys, lungs, skin, and bowels, is the quantity and quality of the diet that experience also shows is most consistent with a healthy existence.

Turning now to the state of fever, although we must admit our knowledge of its intimate pathology to be deficient, we are nevertheless in a position to affirm that it is a general morbid state characterised by a marked perversion of function, and associated with an equally marked alteration in the quality and quantity of the excreta, itself a material index of abnormal tissue change, the actual existence of which within certain limits the microscope reveals to us. The most prominent and obvious functional perversion is an elevation of temperature, and I think it worthy of notice that whilst this, the most characteristic feature, is excessive production of a by no means peculiarly vital force, but on the contrary of the most widespread form of energy known to us, those more distinctly characteristic features of living tissue—contractility, nervous irritability, and gland force—are all diminished in their manifestation. The muscular power of the febrile patient is deficient, his nervous energy is impaired, and the secretions are diminished. Whatever doubts one may entertain as to the seat of origin of pyrexia, whether the fever consists in disorder of the nervous centres whereby there is a diminished loss of heat from the body with a consequent retention, and so elevation of temperature, or whether the process commences in the protoplasmic tissues generally, and only secondarily brings about the systematic disturbances, the broad fact remains that there is an undue consumption of material. We recognise this in the wasting and loss of body weight; adipose tissue, muscles, and even the bones suffer. Nor is the evidence of loss confined merely to gross alterations that may be measured by the scales. Analysis of the excreta shows the extensive disintegration of tissue that accompanies the pyrexia, and at the same time indicating the proximate principles of the tissues, the combustion of which liberates the heat, suggests the food that is demanded for their supply, just as we infer the materials of a normal diet from the nature of the excreta in health.

There is a general agreement that the nitrogenous waste represented by urea, which is the most important (although equally true of uric acid and creatinin), is considerably increased, commencing even before the elevation of temperature and continuing throughout the whole febrile course. In so much as we shall see it is only in rare cases that the febrile state is not accompanied by a diminished nitrogenous ingesta, it must follow that the urea excreted must be drawn from the proteid tissues of the body, which undergo a more extensive disintegration than in health, and this should be remembered in reference to those cases where the total nitrogenous waste is absolutely less than that of health with ordinary diet, but is absolutely greater when the same healthy person is put upon a fever diet, which is invariably deficient in proteid alimentary principles. Respecting the amount of CO_2 in fever, much difference of opinion exists. The experiments of Senator on dogs would at least render it doubtful whether there be an increased formation of it, though there may be an increased elimination, since in fever such circumstances as quickened respiration are favourable to excretion; but the observations of Leyden on febrile patients would seem to show that there is an excessive formation. It is noteworthy, however, that there is by no means the marked considerable excess as is the case with urea, and also with water, which is largely increased in the amount lost (not by the urine, where it is diminished, but) by the skin and lungs. Indeed, the loss of body weight is mainly to be attributed to the loss of water. The elimination of salts in fever affects chiefly those of potash, which are excreted in far greater abundance than in health, even to sevenfold; whilst those of soda are, on the contrary, much diminished in amount, and may even be suppressed. Concerning the acids, whilst hydrochloric acid is certainly diminished, phosphoric and sulphuric acids would seem not to be increased. The urinary pigments are largely increased in amount. Of the hydrocarbons usually excreted in the fæces and by the skin, nothing is known in the febrile state. From such general conclusions as to the excreta of the pyrexial condition, conclusions which I have

not attempted to express in figures, we gather that whilst the increased excretion of water may be regarded as a withdrawal of that fluid from the tissues generally, and is but very partially the result of tissue metamorphosis, it is the nitrogenous tissues of the body that give the most positive evidence of excessive disintregation; the increased elimination of urea and uric acid and of potash salts unmistakably indicates an excessive wear and tear of the protoplasmic tissues of the body, nerve, muscle, and gland, as well as the blood-corpuscles. Remembering, as we have seen, that the main source of heat in health is the oxidation of hydrocarbon material, which is intimately associated with the protoplasm, and that only a very small increment of the total quantity of heat produced is derived from the oxidation of the machine itself, it would seem at first sight that in fever we have a reversal of the process, and that we are in face of an excessive oxidation of the nitrogenous material of the tissues ("tissue albumen" of Voit), as indicated by the excreta, whilst the hydrocarbon suffers but little if any increased consumption—that is, if we are justified in estimating the CO_2 formation as being but slightly increased, this gas being one of the chief products of hydrocarbon combustion. In this way we might be inclined to expect the nitrogenous excreta would be a measure of the heat production; were that so, the maximum temperature should coincide with the period of greatest nitrogen formation, and both should correspond. But it is doubtful if this be so, for preceding the period of elevation of temperature the urea excreted is in excess of normal, and the same excess continues for some time after the defervescence. The latter may be in part explained by the continued removal of what had been produced in the body during the period of fever, but this will not account for the prefebrile excess. If, then, in fever we are to base the quality and quantity of our ingesta upon the character of the excreta, as has been done in regard to the healthy body, the nitrogenous alimentary principles should obviously be administered in excess over the normal requirements, whilst there is no very positive indication for an increase in the hydrocarbon or carbohydrate food-stuffs, or, at all events, not to anything like the same extent.

Now, let us consider how far experience, or at least practice, supports this conclusion. The dietetics of fever, like many other principles based upon insufficient data, have had their fashions, and opinion has swayed now to starving, now to feeding; we pride ourselves, perhaps, at the present day on maintaining a wise medium. I think I may be fairly stating the case if I say that a patient suffering from any febrile disease is put upon a diet consisting of two to three pints of milk, and one to two pints of beef-tea. It is worth for a moment considering what this really represents in terms of alimentary principles. Taking the milk in round numbers at fifty fluid ounces, that would contain about two ounces of proteids, the same quantity of fats, rather more of sugar, and about half an ounce of salts. In regard to the beef-tea it is well at once to recognise that as a nutriment it holds a very inferior position. Supposing the meat from which it is prepared to contain about 20 per cent. of nitrogenous matter, certainly not more than 1 to 1½ per cent. of the proteids will be extracted by any ordinary process of cooking, but with them there will be as much again, or even more, of the meat extractives, such as creatin, creatinin, &c., which although nitrogenous are not nutritious (i.e., are unable to repair protoplasmic waste) and are members of the large group of bodies vaguely known as stimulants. A very variable amount of fat dependent on the quality of the meat used, and about one-half per cent. of salts, make up the 5 per cent. of solids which ordinary beef-tea contains. Such a diet therefore represents, as compared with the minimum requirements of a healthy adult in ordinary work, about half the proteids and fats, a third of the carbohydrates, and rather less than the necessary salts. This is clearly not in accordance with what we should consider to be called for in the febrile state, did we make the excreta the basis of our calculations; and yet we are accustomed to consider that such a diet is most suitable for the general disturbance of nutrition that fever indicates. Obviously, therefore, some other circumstance has to be considered, and that is the capacity for digestion exhibited by the fever patient. It is one thing to calculate on paper that such and such should be the diet, but it comes to be quite another thing when we are brought face to face with digestive organs that are as a consequence of the existing pyrexia greatly disturbed in their functional capability. The process of digestion essentially consists in effecting in the ingesta a series of changes of a physico-chemical character which shall enable them to be absorbed into the vessels. By mastication and the movements of the alimentary canal, and by the solvent and fermentative action of the various digestive juices this is brought about. Except with some gastro-intestinal lesions, fever usually tends to constipation, to be explained in part by the diminished power which the muscular coat of the bowel manifests in common with the muscular system generally. It is rarely, however, that this becomes a serious symptom. But with respect to the chemical process of digestion the case is different; here we meet with conditions which are very far from the normal. I need not mention the various parts played by the secretions of the digestive glands, or how the food-stuffs are reduced to a diffusible condition; but it is desirable briefly to consider the changes that have been recognised as taking place in these secretions when produced in a febrile state of body.

It may at once be said that observations distinctly indicate that they are all diminished in quantity—that is to say, the saliva and the gastric and pancreatic juices. The bile occupies a place apart, and of the intestinal juice in pyrexia I am not aware that any observations have been made. The secretion of saliva is so decreased that in many cases it can have practically no effect as a solvent of starch, and even when present, as shown by Mosler, it is far short of the normal juice in fermentative power, not unfrequently being of an acid reaction. Its absence also removes one of the stimuli to the secretion of the gastric juice, a secondary effect that it is regarded as producing when swallowed into the stomach. The recent experiments of Eringer (1882) do not confirm those of Manassein (1871), which went to show that the acid of the gastric juice is markedly deficient in fever. The former observer, however, asserts the contrary to be the case. But whichever be the truth, the digestive power of the secretion as a whole is far inferior to that of the healthy state; and owing to irregular decomposition induced in the ingesta, decompositions which tend to a putrefactive character rather than to the formation of normal peptones, certain irritant materials are liberated, to which I believe in great part may be attributed the gastritis so frequently accompanying the condition of fever. The pancreatic juice has been made the subject of special study by Dr. Stolinkow,[2] who by establishing a pancreatic fistula in a dog ascertained the characters of the normal secretion, which he compared with the juice after inducing fever in the animal. A temporary increase both of the fluid and its ferments occurred at first, soon followed, however, by a more prolonged decrease in amount, and impaired proteolytic and amylolytic power. Even admitting that our knowledge of the nature of the digestive juices in fever is very deficient, enough is known to justify the assertion that their capability in one direction or another is seriously deteriorated, affording thereby an opportunity for the formation of decomposition products, many of which are of a most noxious character. The obvious indications under such circumstances are to give aliment that requires the minimum digestion, to prevent as far as possible the delay of the food in the gastro-intestinal tract, and supplementing where we can the deficiencies of the secretions by artificially prepared ferments, acids, and alkalies. Heat, as we have seen, is one of the force manifestations of tissue change, as urea, carbonic acid, and water are some of the material expressions of the same. In fever the heat, the tissue changes, and the excreta are all increased. The demand for increased food is therefore obvious, provided it can be digested or can be administered in such a diffusible form as to require but little digestive change. With secretions that have suffered such considerable alterations as I have described, the digestion of the ordinary articles of diet is impossible, and experience dictates a departure from the usual meals.

I have already criticised what may be called a typical fever diet of milk and beef-tea, and a reference to the general rules laid down and followed by those who are entitled to speak with authority on these points shows a remarkably large proportion of the proteid alimentary principles in the permitted diet relatively to the fats and starches. Such would be quite in accordance with the indications afforded by the excreta, as I have shown; but I rather think the real ground for such exclusion of hydrocarbon and carbohydrate principles (materials which, be it observed, form by far the greatest proportion of the solid

[2] Virch. Archiv, 1882.

ingesta in a normal diet) is a widespread belief in the incapacity for their digestion by the febrile patient, and the injurious effect of the lactic and butyric acid fermentations that take place in the stomach from the improper fermentation of the amyloids. Some writers are very emphatic on this point, and doubtless with good reason. Quite recently the experiments of Dr. Tchernoff have demonstrated that there is an average of 7·2 per cent. less absorption of fats in a fever patient than in the same person in health, when from 80 to 90 per cent. of that ingested obtains entrance into the vessels, a marked exception to this occurring in the case of enteric fever, where the large increase of leucocytes in the mucosa is regarded as effecting an increased transfer of fat granules from the epithelial surface into the lacteals. But if these fats and starches are to be forbidden, and still more if the heat products of pyrexia be but slightly due to their combustion, one can see good reason for the larger relative share that nitrogenous material should take in the total aliment. But, notwithstanding this, I am doubtful whether there is not a flaw somewhere in the reasoning, and am justified by no less an authority than the late Dr. Parkes, who, in his memorable Croonian lectures on the Elimination of Nitrogen in 1871, spoke on this point as follows:—"Can we foretell from our present knowledge of the chemistry of fever what should be the treatment by diet? I do not think our knowledge is sufficiently precise for this, and practice alone can rightly guide us. Still, some suggestions present themselves. There is in fever a waste of albuminous tissues; it would, therefore, at first sight appear an indication to feed those tissues with nitrogenous food. But it may be questioned whether they can be fed. Some of Huppert's observations indicate that they cannot be, and that the nitrogen is eliminated without being used by the wasting parts. And if so, what becomes of the albuminous food? It must be disposed of by the the glandular elements, and add to the work already thrown on those organs. May it not be that, in the height of pyrexia, partial abstinence from nitrogen should be the rule, while the succeeding period of apyrexia is that in which it should be given, when the body retains it, and thus makes up the standard it had lost?" Continuing, the same writer expresses a belief, founded on experience, "that the almost exclusively animal diet sometimes given in fevers is not so useful in sustaining the strength as is supposed, and that if it were not for the loss of appetite which limits the supply, we should perceive more clearly the bad effects," and he has thought that "the vast deposit of urates which sometimes marks the end of fevers might be really caused by excessive animal food," and that he has actually seen "gouty attacks brought on by that system of feeding." Referring to fats and carbohydrates, Dr. Parkes observed "a supply of fat to meet the disappearance of the same from the body is rarely attempted in practice, and yet there is no doubt that if digestible fats are given to fever patients the degree of emaciation is much less, and at the end of the fever the body seems more speedily to recover itself. The fats are often considered hurtful, and are sometimes excluded from fever diets, so that with the large supply of animal food, the patients are brought almost into a state of Bantingism. The starches and sugars are generally given in fevers, and it cannot be doubted that this is right, though probably the amount given is usually far too small. An eminent physician desired for his epitaph the words, 'He fed fevers.' His pride in his treatment was legitimate; but it may be still a question with what they should be fed."

I do not know that we can honestly say we have reached a point much beyond this, even after the lapse of fourteen years; our knowledge is "not yet precise enough," and I am not sure that practice has guided us very far, it having preferred to pursue the old track without much question. I cannot help thinking that the strong objection held to the administration of amyloid food in fever is exaggerated. I am in the habit of insisting upon a fair share of it in the treatment of my patients, and I have not yet seen reason to attribute any ill effects to the proceeding. In the artificially digested foods that we have at our disposal now, I believe we possess alimentary principles that, in the form of partially digested proteids and amyloids, are quickly absorbed, and hence diminish the opportunities for butyric and allied fermentation, and also make less demand upon the digestive secretions. It cannot be too carefully remembered that one object to be aimed at in laying down a diet for fever is to prevent delay of the ingesta in the alimentary canal. Even the blandest and most nutritious aliment may become a source of noxious decomposition product when acted upon by juices secreted in the pyrexial state, but in reference to this the question of absorption has to be taken into account, and of the effect of fever on that I have no knowledge beyond what I have said respecting fats.

I think I need not further urge the importance of this subject, for clearly to know how to sustain our febrile patients, and, what is of equal consequence, to shorten thereby their period of convalescence, during which the tissues are getting back into their normal condition, would be of extreme value, and although exact information on many of these questions is still wanting, I have endeavoured without seeking to be original, though perhaps suggestive, to give a brief and coherent account of the state of existing views, to indicate what we know and what we do not, to formulate our ignorance no less than our knowledge, and to offer thereby the opportunity for a rational plan of further inquiry.

ONE HUNDRED AND ELEVEN CASES OF LITHOLAPAXY.

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(Continued from page 378.)

CASE 24.—A Mahomedan male, aged forty-eight, was admitted on Jan. 9th, 1883, with retention of urine which had existed thirty-six hours. He had suffered from symptoms of stone for nine months, being much exhausted, with pinched, anxious expression. On passing a full-sized catheter a small calculus was detected at the neck of the bladder, blocking up the urethral passage. This was pushed back with some force and the retention of urine relieved. The patient was at once anæsthetised and litholapaxy performed. The operation lasted only eight minutes; the débris weighed twenty grains.—10th: Passed very little urine since yesterday. Pain in region of the bladder. Catheter passed and a small quantity of urine drawn off. Hot fomentations and hot poultices to the hypogastrium were ordered; also one grain of opium internally every three hours.—11th: Well-marked peritonitis present. Temperature 102° F.; respiration 44 per minute; urine scanty. The catheter was used twice daily.—13th: No pain. Great distension of abdomen; patient very weak; passing a little urine. He died quietly in the evening.

Post-mortem examination.—On opening the abdominal cavity it was found distended with clear serous fluid. The bladder was embedded in a mass of amber-coloured gelatinous lymph, which broke like cold jelly on application of the fingers; congestion of the cellular tissue at the base and neck of the bladder; mucous membrane of the urethra near the neck of the bladder highly inflamed; no congestion of the bladder or kidneys.

CASE 44.—A Hindoo, aged forty-five, was admitted on May 23rd, 1883, with symptoms of stone, the most prominent of which were agonising pain in the region of the bladder and passing of blood and pus in the urine. The symptoms had existed eight years, and the patient was in a very weak state. A large calculus was detected by the sound. On the 25th I performed litholapaxy. Considerable difficulty was experienced owing to the large size and hardness of the calculus, and the operation progressed very slowly, fourteen drachms being removed in seventy-five minutes. No more fragments could be felt by the lithotrite, but on passing the sound a large fragment was detected high up at the fundus of the bladder. As the patient was very much exhausted, I was afraid to keep him longer under chloroform, so I had unwillingly to postpone the completion of the operation to another day.—24th: He had great pain in the region of the bladder the whole of yesterday, which was controlled by one grain of opium administered every three hours. Urine scanty and blood-stained. Temperature 104° F.; great thirst. Fever mixture ordered and opium continued.—27th: Had a severe rigor last night; fever continued all night; patient anxious and depressed. Ten grains of quinine were ordered, and to be repeated in the evening. No pain in the abdomen, but great pain in the left hip.—28th: Abscess forming in the

left hip. All the symptoms of blood-poisoning present. Carbonate of ammonia and bark mixture ordered. The patient died at 10 P.M.

Post-mortem examination.—The walls of the bladder were greatly thickened, sacculated, and contracted; in the bladder were a large fragment of calculus (about one ounce in weight) in a sacculum at the fundus, several small patches of inflammation of the mucous membrane in the vicinity of the fragment of stone, and some milky urine. The tissues of the left gluteal region and round the left hip-joint were swollen and infiltrated with dark-red fluid. Cause of death pyæmia.

CASE 97.—A Mahomedan male, aged twenty-six, was admitted into the Bareilly Civil Hospital on August 12th, 1884, suffering from the usual symptoms of stone, which had existed six years. During the last three years the symptoms became much aggravated. On admission micturition was extremely painful and difficult, and the urine was mixed with pus and blood. The patient was in extremely bad health; very thin and anæmic; scarcely able to stand. On August 14th I performed litholapaxy. Chloroform was given by Dr. Corbett, Royal Medical Service, by means of Junker's inhaler. The calculus was a large hard one, weighing three ounces and a drachm a half, and consisted of oxalate of lime. The operation lasted fifty-two minutes. After slitting the floor of the meatus slightly a large lithotrite was passed, but, owing to the contraction of the walls of the bladder on the stone, it could not be grasped. The lithotrite was withdrawn and four or five ounces of water injected by the aspirator, and then the calculus was easily grasped after a little manipulation. I had to use all the force I was capable of before the stone gave way. The fragments were then disposed of one by one, great force being necessary in dealing with even the smallest fragment. The lithotrite had to be introduced six or seven times, and the evacuator as often, before the whole of the calculus was disposed of. My new large lithotrite did great execution amongst the fragments, the glass receiver of the aspirator being nearly filled each time after withdrawal of the lithotrite. Two or three times during the operation the patient was very faint and almost ceased breathing, and after the operation the pulse was extremely weak. Artificial breathing had to be maintained, occasionally, for an hour after the operation. Evening: Passed urine freely during the day, the earlier portions were blood-stained, the later clear; no sand or fragments passed; no pain in the bladder, but tenderness along the course of the urethra. Pulse 90 (very weak).—15th: Patient very weak; passed three loose stools during the night; urine passing freely, and quite clear; vomited twice this morning; pulse almost imperceptible; hands and feet cold; drowsy and restless; wanders in his conversation at times. During the course of the day the patient revived a little, but he grew weaker towards evening, and died at 9 P.M.

Post-mortem examination.—Bladder empty (not a trace of sand was present), contracted, and its walls much thickened; mucous coat was corrugated and slightly sacculated; urethra congested along its whole length; ureters dilated along their whole length, so that the tip of the little finger could be passed into them from the bladder; kidneys extensively diseased; the calyces were much dilated, and the medullary portions had almost disappeared; the cortical portions were hard and pale; pericardium distended with clear straw-coloured fluid.

The patient in Case 7 was almost moribund on admission to hospital. There was complete atony of the bladder, and the condition of the mucous membrane of the bladder may be imagined from the fetid state of the urine. The man was so weak and exhausted that I could not entertain the idea of performing lithotomy, so I gave him the only prospect of recovery in performing litholapaxy. In Case 24 death resulted from peritonitis, evidently produced by extension of inflammation from the neck of the bladder. It is difficult to say if this was due to the operation or to impaction of the calculus at the neck of the bladder, and the force necessary to displace it. I am inclined to think the latter was the cause. There was no difficulty whatever in performing the operation; the stone was very small, and the operation lasted only eight minutes. The bladder was healthy except at the neck, where the calculus had lain impacted for two days. The kidneys also were healthy. It is probable that the calculus, forced on by the accumulation of urine and efforts at micturition, acted as an irritant to the mucous membrane, and that the force necessary to push back the stone into the bladder increased the irritation, thereby producing inflammation. In Case 44 the cause of death was pyæmia, the result of cystitis supervening on the operation, and caused by the irritation of a large fragment, which it was found impossible to dispose of at the first sitting, owing to the exhausted state of the patient. Death in Case 97 resulted apparently from the shock of the operation and exhaustion produced by the chloroform, acting on a constitution worn out by the painful nature of the malady and extensive disease of the bladder, ureters, and kidneys. Emboldened by having previously removed a larger calculus successfully in Case 16—the details of which will subsequently appear—and by a long-continued series of successful cases, from Case 45 to Case 96 inclusive, in many of them the calculi being very large, I had no hesitation in attacking the stone in this case, and I feel confident the patient would have recovered but for the extensive disease of the kidneys which existed, and from which the patient must have succumbed to any operation. The large and powerful lithotrite sent me lately by Weiss worked admirably in this case. The manner in which a large oxalate of lime calculus, weighing over three ounces, and as hard as flint, was crushed to atoms and completely removed by the aspirator in fifty-two minutes, without the necessity of any dilatation of the urethra or injury to the urinary passage, shows what can be done by the new operation. Though the crushing power of this instrument is very great and the strength of the steel enormous, it was noticed both by the surgeons who honoured me with their presence during the operation and by myself that when dealing with a large and hard stone of this kind the leverage in the instrument is deficient. This might be easily remedied by having long knobs to the wheel-shaped handle of the male blade, and by the addition of a light crossbar to the cylindrical handle of the female blade, both the knobs and crossbar being removable, so that they might be applied only when large calculi are dealt with. With the exception of the four deaths above referred to all the cases made excellent recoveries. Cystitis, which so frequently followed on the old operation of lithotrity, and which often left the patients in almost as bad a condition as they were before the operation, seldom occurs after litholapaxy; and when it does occur, or had existed previous to the operation, it is very amenable to treatment.

The 111 operations were performed on 109 different individuals, the disease having only twice recurred. In one of these cases the patient, aged sixty-five, was suffering from enlargement of the prostate. Six months after the first operation, in which four drachms of a soft phosphatic calculus were removed, he returned and had a similar calculus weighing eighty-five grains removed. In old patients of this kind, with enlarged prostate, the disease frequently recurs, owing to the fact that the bladder is never completely emptied of urine during micturition. In the other case several small calculi, varying in size from that of a pea to that of an almond, and weighing in all one ounce, were removed, and the patient left the hospital quite well. A month afterwards he returned with symptoms of stone. At first I imagined that a fragment had been left behind at the first operation, but on applying the cannula and aspirator I removed twenty-seven minute calculi, weighing half a drachm in all. I then found that in the interval the patient had suffered from severe kidney colic, and that the minute calculi, each of which consisted of a uric-acid nucleus with phosphatic deposit, were the result of a shower of uric-acid particles from the kidney. The calculi removed varied in weight from five grains to three and a quarter ounces. There were fifty weighing half an ounce and upwards, twenty-seven one ounce and more, seven two ounces and upwards, and two over three ounces. The following are the details of the case in which the largest stone was removed, to which I wish to call especial attention:—

CASE 16.—Illaki Buksh, a Mahomedan aged sixty, was admitted into the Moradabad Civil Hospital on Dec. 3rd, 1882, with all the symptoms of stone in the bladder, which had existed eleven years. On admission the patient could only pass urine in drops continuously throughout the day and night, and the passage of urine was attended with great pain. His penis and foreskin were hypertrophied from the patient's constantly rubbing the organ to relieve the pain and irritation. A urethral calculus was felt in the fossa navicularis. When the patient tried to pass urine he had to rub and pull the penis, and in this way push the urine past the calculus in the urethra. The urine was mixed with pus and blood. The fæces passed were ribbon-shaped, due to pressure of the stone in the rectum. On passing the

finger into the rectum a large stone could be felt in the bladder. The patient's health was very bad. He was pale, thin, weak, and anæmic, and he had a pinched, anxious expression, the result of long suffering. On Dec. 5th I performed litholapaxy, the urethral calculus having first been removed after slitting the floor of the urethra slightly. The operation lasted sixty-six minutes, and the débris weighed three ounces and a quarter, the calculus being a hard uric-acid one. Considerable trouble was first experienced in grasping the stone, owing to the contraction of the walls of the bladder on it. This was obviated by injecting water into the bladder. The lithotrite was introduced at least a dozen times, and after each crushing a large quantity of débris was washed out through a No. 18 cannula. With the exception of slight pain in micturition during the first day or two the patient had no after-trouble. He made a rapid recovery, and on Dec. 15th, when discharged from the hospital, the following entry in my note-book describes his condition:—"Patient now rid of all bladder symptoms. Urine quite clear; bladder retains a large quantity at a time. Has grown fat and strong. Says he has not been so well for several years. This man was a miserable creature on admission to hospital ten days ago, and now leaves it in excellent health." This is, as far as I am aware, the largest calculus that has ever been removed from the bladder by the crushing operation at one sitting. The amount of manual labour required in crushing a large and hard stone of this kind is something excessive. I felt completely exhausted after the operation. My hands were blistered from the lithotrite, and the muscles of my arms ached for two or three days subsequently. I cannot too strongly advocate the desirability of removing the whole of the calculus at one sitting. This is the essential principle of the operation. This fact seems to be lost sight of by some surgeons, for I have noticed that in some of their recorded cases a second, and even third, operation was necessary. An operation prolonged over several sittings in this way involves all the dangers of the old operation of lithotrity and ceases to be litholapaxy in my acceptation of the term. Male patients of all ages, from sixteen to ninety-six years, were operated on. The average age was forty-seven years and a half. Several patients of eighty years and over had large calculi removed successfully; and in one case I removed a hard uric-acid stone weighing nine drachms and a half from a patient aged ninety-six, the operation lasting one hour. The details of the case are interesting, so I give them.

CASE 69.—This was a case in private practice. The patient, a Mahomedan of Moradabad, stated that he was close on 100 years of age, and by calculation he appeared to be ninety-six. He was a dried-up, withered creature, without a tooth in his head, and consisting almost of skin and bone only. Several of his sons were living, and one of them looked seventy years of age. Till about a month before coming under my treatment he had enjoyed good health, and used to walk about the bazaar daily. He was suffering from well-marked symptoms of stone, especially great pain in passing urine. He was very weak and unable to leave his bed. On October 28th, 1883, I performed litholapaxy, the débris weighing nine drachms and a half, and the operation lasting one hour. The patient made a rapid recovery and was able to walk about on November 13th. Five months afterwards I had the pleasure of showing this old gentleman to Surgeon-General W. Walker. He was then in excellent health, so much so that Dr. Walker writing of him at the time amusingly says: "He must certainly be ninety, and looks as if he might live for thirty years now, and then do service as an old rail."

My experience is that old patients bear the operation much better than young men, and in them it is less likely to be attended by urethral fever. The explanation of this is to be found, I have no doubt, in the fact that the mucous membrane of the bladder and urethra gets less sensitive as life advances, and also that the urethra is more capacious in old than in young men. In several instances very small calculi were removed. The diagnosis of such calculi by the sound is often a matter of extreme difficulty; and experience teaches us that a patient is often sent away from hospital with a stone in his bladder after an opinion to the contrary has been expressed. I cannot speak in terms of too high praise of Sir Henry Thompson's sound. Any sound will detect a large or moderate-sized stone; but when I have failed with all other sounds in detecting a small calculus, Sir Henry Thompson's sound has brought it to light. I find from experience, however, that, even with Sir Henry Thompson's sound, a small calculus lying in some peculiar position in the bladder may evade detection. In the *Indian Medical Gazette* of March last I called attention to a new method of diagnosis for small calculi by means of the aspirator. The method of employing it is indicated in Case 54.

(To be concluded.)

TWO CASES OF HYDROCELE IN THE FEMALE.

BY SAMUEL OSBORN, F.R.C.S. ENG.

HYDROCELE in the female subject is of sufficient rarity to warrant the following two cases being put on record. Both were admitted as out-patients to the Hospital for Women, Soho-square, within a few weeks of each other, and were sent to me as supposed cases of irreducible hernia. The first case is one of hydrocele of the femoral canal, and of greater rarity than the second, which is one of the canal of Nuck. The first is very similar to a case that was reported in THE LANCET on April 5th, 1879. It is, however, in a younger woman, and both are of especial interest, in showing, equally with hydrocele in the male subject, that if it is desirable to effect a permanent cure, simple tapping is not sufficient. I mean tapping and subsequently allowing the patient to return home, walking or travelling some distance to get there. I am of opinion that if, instead of treating these cases as out-patients, I had simply tapped them, manipulated the two sides of the sac by rubbing them together to set up superficial inflammation, and subsequently applied an ice-bag and kept the patients in bed, I should have succeeded in curing them at the first operation, in the same way as I was successful in the case previously reported. The diagnosis of these cases is not easy; the difficulty of examining them by transmitted light is great. An ordinary stethoscope is the best instrument to use for the purpose, but with this care must be taken, as it is very easy to direct the vision against the inner side of the tube and not directly to its opposite end. An absence of impulse on coughing, and sometimes fluctuation, are the diagnostic signs to aid us, but that of transparency by transmitted light is the only trustworthy one.

CASE 1.—Eliza W——, aged thirty, a married woman, first noticed a lump in the right thigh seven or eight weeks before she came under observation, which gradually increased in size until it became as large as an ordinary hen's egg. The tumour was exactly in the situation of a femoral hernia, for which she was sent by her medical man. It was soft, with no impulse on coughing; there was indistinct fluctuation, and, although transparent by transmitted light, it was somewhat difficult to obtain this means of diagnosis by reason of its situation. On July 9th the swelling was tapped, and a clear yellow fluid evacuated. A femoral truss was applied to keep up pressure upon the walls of the cyst, after they had been well rubbed together; and the patient returned to her home in Essex, and kept to her bed for a week. Three weeks from the date of the tapping the cyst refilled, and became the same size as at first. On Oct. 10th, the patient being in bed, the cyst was tapped, and, the walls having been thoroughly manipulated, tincture of iodine was injected. This occasioned momentarily great pain, and the cyst was allowed to empty itself of the injected fluid. An ice-bag was applied, and kept on continually for three days. Slight inflammatory swelling took place, but this soon subsided, and she got up after ten days, wearing her femoral truss; the swelling had entirely disappeared. On Dec. 4th there was no return of the swelling, and the use of the truss was discontinued.

CASE 2.—Jane P——, aged thirty-five, single, had noticed a lump in the right groin for seven years, which had gradually increased in size. She had never worn a truss, but had used a bandage, which was discontinued on account of its occasioning discomfort. The swelling was the shape and size of a large pear, with the stalk pointing downwards to the labia; it was transparent by transmitted light, with no impulse on coughing, and no alteration in size when lying down or after a night's rest. On Sept. 11th the cyst was tapped and rather more than half a pint of canary-coloured fluid withdrawn. A few movable glands were felt after the evacua-

tion of the fluid, but the cyst collapsed completely. The walls of the cyst were well manipulated by rubbing the two internal surfaces together. An ice-bag was applied for some four or five hours; and, a right scrotal truss having been applied, she was allowed to return home and ordered to keep her bed for three days. This she did, but immediately she commenced to go about the swelling returned, and became as large as ever. On Nov. 6th the patient was admitted into hospital, and, the cyst having been tapped, about forty minims of Morton's solution were injected. On the 7th she complained of much pain in the lower part of the abdomen and in the cyst. A considerable quantity of clear fluid came from the puncture during the night, soiling the linen and rendering it quite stiff. By the 9th the swelling had increased in size, being tense and red, although the pain was less. A trocar was inserted and about four ounces of clear claret-coloured fluid were evacuated. On the following day the patient felt much relieved; a considerable quantity of fluid had escaped during the night. On the 18th the cyst was nearly the same size. It was again tapped, and the fluid, which came away with difficulty, necessitated the cyst being well squeezed to thoroughly empty it. A certain portion of the swelling remained, as if partially solidified. About half a drachm of tincture of iodine was then injected, and a flannel spica bandage put on and an ice-bag. The next day the patient felt comfortable, experiencing no pain. On the 22nd an ice-bag, which had been kept on night and day, was discontinued. Swelling still present, but about half the size it was originally; no fluctuation, and apparently solid; pad and firm pressure applied. On the 27th the swelling was much less; pressure was still kept up by means of a spica bandage, and a small piece of mercurial ointment was placed on the swelling previous to the bandage. She left the hospital on Dec. 11th, quite cured; no sign of the swelling remained.

Maddox-street, W.

ACUTE PERFORATING ULCER OF THE ASCENDING COLON.

BY JAMES OLIVER, M.B. EDIN., M.R.C.P. LOND.

IT has been asserted, and doubtless correctly, that perforating ulcers—leaving out of consideration typhoid, tubercular, and such allies—may, and do, occur throughout the gastro-intestinal canal. The stomach and duodenum are, however, apparently the situations preferred. Few cases are on record where the colon itself has been the seat of perforation. Duodenal ulcer has frequently been noted in connexion with extensive burns of the body; the causation, however, must still remain a mystery. Simple inflammation of the gut rarely gives rise to perforation. Considering how common, comparatively speaking, inflammatory changes in and around the cæcum occur, it is somewhat astonishing that complete ulceration so seldom results. In the case which forms the basis of the few remarks I have to make the ascending colon was the seat of perforation. Two ulcers were discovered side by side longitudinally in the large intestine, two inches and a half above the ileo-cæcal valve. The larger was about half an inch in diameter, whilst the other was only large enough to admit the tip of a goose-quill. The surrounding tissue was apparently healthy, as well as that intervening between the two openings. Both perforations were round in shape, their margins being perfectly regular. The various coats of the bowel had necrosed to an equal extent throughout; the muscular, however, had retracted, and a partial prolapse, so to speak, of the apparently redundant mucous membrane had resulted. The larger opening from the outside gave the appearance of an artificial anus, whilst the smaller was barely to be detected because of the recoil of the elastic tissue of the gut. The position of the ulcers was as nearly as possible the middle of the posterior surface of the ascending colon. Posteriorly this part of the colon, deriving no covering from the peritoneum, is attached by connective tissue to the fascia covering the quadratus lumborum and the front of the right kidney. Gradually by necrosis, the bowel having become tunnelled, fæcal matter escaped into the areolar tissue, separating by degrees the colon and right kidney from the underlying structures. The peritoneum showed but little sign of inflammatory change, the lower margin of the liver alone betraying any sign of fibrinous exudation, and this but limited. The etiology of perforating ulcer is still a debatable question. It is more than likely, however, that thrombosis is a probable cause, the change resulting being comparable with that occurring under similar circumstances in the brain and spinal cord. Complete occlusion of the small blood channels brings about a gradual death of the part by staying effectually its nutrition. It is doubtful whether the gastric or intestinal secretions ever aid in its production.

Montague-street, W.C.

A NEW SPLINT FOR THE TREATMENT OF TALIPES.

BY F. T. PAUL, F.R.C.S.,
SURGEON TO THE ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

IT has always appeared to me, as a general surgeon, that in our ordinary hospital practice cases of confirmed talipes frequently do not obtain the full amount of benefit that is possible—more frequently, I mean, than other varieties of remediable defects. I suppose that this might be explained, if it be really a fact, in different ways by different surgeons. The explanation that has occurred to me is simply that the mechanical treatment following any operative procedure needs to be so prolonged, and so assiduous during the whole time, that the careful patience of either the surgeon or the

patient often breaks down before the cure has been effectually and permanently established. I have been in the habit of using sheet iron side splints with a foot-piece, fixed on by first firmly strapping the foot to the foot-piece while the foot is in its deformed position, and then forcing the side splint to the leg, and so reducing the deformity. This plan answers well enough if the splint be refixed every few days for six or twelve months. In my own practice I observe that I keep up a pretty close supervision of the case for a month or two, then it gradually drops entirely into the hands of my house-surgeon; subsequently it falls to the care of the nurse, and lastly is lost sight of for a time, and when seen again is often as bad as when it first came under treatment. For a long time I have felt that if a surgeon had the time to undertake a complete supervision of his cases of talipes he could usually cure them by simple mechanical means, and it was owing to the unsatisfactory results that I constantly met with in the practice of my colleagues as well as myself that I attempted to devise a splint which would be so easy to manipulate that the surgeon could himself take in hand the treatment of his talipes cases without that loss of time which at present frequently causes us to relegate the duty to someone else. The splint (see figure) consists of the ordinary side rods and padded ring of a Thomas's knee splint (A). Joining the side rods at the bottom is a ring to walk upon and a cross-bar from one to the other. This latter has a slot in the

middle part of it, in which a strong steel ball can be fixed. The ball works in a socket attached to a plain wooden foot-piece (c). The foot-piece is screwed to the socket by three or four ordinary screws, which can at any time be taken out and a boot attached instead when the treatment is sufficiently advanced (D).

The method of applying the splint is as follows:—The foot-piece with the ball-and-socket joint is taken out of the splint, the joint unscrewed, and the ball removed, so that strapping can pass under the foot-piece anywhere. The child's foot is then very carefully strapped to the foot-piece in such a manner that it will not require to be renewed for some time. The ball is then replaced and loosely screwed up, and the foot-piece with the limb fixed to the splint. It is unnecessary as a rule to put on more than a couple of straps round the leg and splint, but when inversion is marked a better fixation of the limb will be required in order to be able to evert the foot. All that is left to be done is to gently force the foot into a somewhat improved position and screw up the ball-and-socket joint. At the next visit this is loosened and refixed in a still better position; and as it is only the work of a minute, it can be undertaken by the surgeon as he makes his daily rounds. Children walk about easily in these splints, and so far I have met with very good success in using them. If only one leg is affected, a high sole should be made to the opposite boot to avoid obliquity of the pelvis.

The drawback for hospital use is the cost. There is a good deal of work in the splint, and it must be well done or the joint will not remain fixed when in active use. Mr. Critchley of Liverpool has taken great pains to carry out my instructions in making the splint, and has succeeded very well. He supplies them to the hospital at a sovereign each.

Liverpool.

A RARE CASE OF SPINA BIFIDA.

BY W. T. CREW, F.R.C.S. ENG.

THE following case seems to me worthy of record in the pages of THE LANCET.

A full term, well-nourished infant, a day old, the first child of a mother aged twenty-one, was brought to me early in December of last year. Over the lumbar spine in the middle line was a sessile tumour measuring about one inch and a third longitudinally, and slightly less transversely, and raised five-eighths or three-quarters of an inch above the integumentary surface. Its appearance exactly resembled a blister, with two exceptions—namely, first, that a few minute bloodvessels could be detected on its surface; and, secondly, about its centre, over a circular area, the diameter of which was about half an inch, the spinal cord, or rather the cauda equina, was bare, and presented somewhat the appearance of an ulcer, from which a clear fluid exuded. By transmitted light (daylight was quite sufficient), the cauda equina could be clearly seen leading up to this spot. The tumour appeared to swell out as the child cried. For further examination I oiled my fingers, as I feared the sac would burst by rough manipulation. On slight pressure the edges of the fissure in the spinal canal could be easily defined, small buttresses of bone being distinctly felt all round the base of the sac, which I regarded as the edges of the deficient vertebral laminæ. On examining the head the fontanelles were unusually large, and the sutures between the various bones were excessively wide, and during violent expiratory efforts the meninges became very prominent. At the junction of the frontal and nasal bones was a rounded meningocele, and on the left side, through a large Wormian bone in the parietal region, was another meningocele the size of a large marble or small walnut. Several large Wormian bones were present in the frontal and parietal bones, and one in the occipital. Both thighs were tightly flexed on the abdomen, and both legs flexed on the thighs. The right foot was in a condition of severe talipes calcaneus, the left less so. The toes of the left foot were strongly flexed; the arms and fingers appeared to move naturally; there were no convulsions, and the child, otherwise well, took kindly to the breast. On the second day after birth the cerebro-spinal fluid began to escape through a small aperture which had formed in the sac, and continued to do so. On the fifth day the sac began to feel firmer at its base; the integument appeared to be spreading over the tumour. The clear fluid now became turbid, and on the ninth day the whole sac was much thicker and less translucent, partly owing to the cutaneous overgrowth, and partly to the deposit of inflammatory materials in its interior. Four weeks after birth the tumour was smaller; its surface resembled normal skin, except for bluish, almost nævoid congestion. Pus now came away freely from the aperture. That portion where the spinal nerves had been bare had now become covered over with skin. The meningoceles disappeared; but the protrusions of the cerebral membranes were more distinct between the various sutures, which showed no signs of contracting. The distortions of the lower extremities became more pronounced, and the child wasted. At the end of the fifth week slight convulsive seizures began, and in the sixth week the patient died. On opening the spinal canal after death, there was exposed a fissure in the whole of the lumbar region of the spine an inch and a half long and three-quarters of an inch wide. The bodies of the vertebræ appeared normal. Spinal meningitis was well marked, and the sac was filled with lymph and pus. The head was not interfered with.

Although it was impossible to verify it post mortem, I believe the sac was originally formed of the spinal arachnoid only, the bluish-white appearance said to result when the spinal dura mater is exposed being entirely absent. I may say that the mother, in describing its primary appearance, spoke of it as "like a water-bleb," which I thought very apt. The other point in the case which I thought remarkable was the long period (nearly six weeks) which elapsed before the fatal termination; and it was interesting to note the failure of development of the cranial bones in conjunction with those of the spine.

Nottingham.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas at morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

THREE CASES OF SARCOMA OF THE TESTIS; CASTRATION; RECOVERY.

(Under the care of Mr. SYDNEY JONES.)

THE importance of diagnosis in cases of enlargement of the testis is very great, for *early* removal of malignant disease is a large factor in the ultimate result aimed at—namely, complete cure. It is, however, difficult in the early stage of enlargement of a testis to give a decided opinion, and in many cases even the best authorities can give no definite diagnosis until various remedies have been tried and the tumour punctured; the latter with a view of examining the fluid withdrawn and any growth brought away in the cannula. Our readers will recollect that the chief difficulty at the commencement is to diagnose the disease from chronic inflammation of the body of the testis, and later from chronic hydrocele and from hæmatocele; and this task is rendered more difficult when the attention of the patient has been first directed to the diseased organ by a blow or other injury, as in two of the cases recorded by Mr. Sydney Jones. A progressive solid enlargement of the body of the testis, without evidence of inflammation, the surface being of unequal consistency, with dilatation of the scrotal veins, should always be looked upon with suspicion, more especially if treatment prove of no avail in arresting the increase of the growth.

CASE 1.—G. S——, aged twenty-one, a potter, was admitted under the care of Mr. Sydney Jones, Jan. 22nd, and left, apparently cured, March 5th, 1884. The family history was good, and the patient had enjoyed excellent health until four months and a half before admission; he had never suffered from any venereal complaint. Eight or nine months before admission he noticed a small hard lump about the size of a pea on the outer and upper side of the right testicle,

which slowly increased in size, but which was at first freely movable. Four months and a half ago he knocked his right testis against a table, and the injury was followed by rapid swelling; so much so that it was the size of the patient's fist on the following morning. It was quite soft and doughy at first, and diminished in size somewhat after the application of ice; but in a few days became quite hard, and had since grown slowly. The pain caused by the injury was not severe, and there had been no pain since. After the accident he could feel the small swelling which had existed previously in the middle of the soft swelling, it being then about the size of a walnut, but when the swelling became quite hard it could no longer be felt. When admitted he was complaining of the swelling of his right testicle, and appeared somewhat anæmic, pale, and was rather thin. On examination, there was an oblong, somewhat pyriform swelling occupying the right half of the scrotum and bulging into the left half. It was hard and elastic, and no decided fluctuation could be felt. It extended into the highest point of the scrotum, and could be traced as high as the external abdominal ring. Underneath the tumour a projection from it, like an enlarged testicle, could be made out, but no pain was felt on pressure, either over this or any other part of the tumour. There was no testicular sensation. There was no impulse on coughing, and the size of the growth did not vary. The superficial veins of the scrotum were enlarged on the right side. The glands in the groins were not enlarged, and no enlargement could be felt in the glands of the abdomen. The patient was otherwise apparently healthy. There was no albuminuria.

Jan. 22nd.—The tumour, which had been punctured in the out-patient department before admission, was again punctured, and, as on the former occasion, only bright blood flowed through the cannula; examined microscopically, this showed no evidence of new growth. From above downwards the growth measured 11¼ in., and the greatest circumference 8¾ in.

30th.—There had been no diminution in size under the application of ice, ordered on the 26th, and Mr. Sydney Jones decided to examine, and, if necessary, remove the tumour. The parts having been shaved and washed with 1 in 40 carbolic solution (the patient being under the influence of ether), a vertical incision was made, about an inch to the right of the raphe, through the scrotal tissues down to the tumour, which was found to be of sarcomatous nature; an elliptical incision was then carried from the external ring to the lowermost portion of the growth and back to the starting-point; the tumour was then rapidly dissected out, the numerous vessels being caught with clamp forceps; the cord was then seized with a stout pair of clamp forceps, the tumour being cut off below. Numerous ligatures were required to arrest the general bleeding, and the cord was ligatured. The edges of the wound were carefully adapted by means of silk and catgut sutures, a drainage-tube was placed from the highest point of the wound, and, after the parts had been thoroughly washed with carbolic solution, the ordinary antiseptic dressing was applied under the spray, which had been employed during the operation. When the growth was incised, the cut surfaces bulged out and presented a gelatinous structure, which appeared to have grown from the upper part of the testis; but this organ could not be distinguished. Microscopically the growth was sarcomatous, and consisted chiefly of small round cells. There was some clear fluid in the tunica vaginalis, into which small bosses of new growth projected. The patient vomited after the administration of the ether. At night the temperature was 98·8°.

31st.—At 2 A.M. the temperature was 100·2°; at midday 101·8°; at 8 P.M. 99·8°. There was no pain, and he had slept well.

Feb. 4th.—Wound dressed. Some purulent discharge from the upper part of the wound on pressure. Wound somewhat offensive in smell. Two stitches removed. The temperature has varied from 99° in the morning to 100·4° in the evening. No pain whatever.

6th.—Wound redressed; a good deal of pus came from the wound, especially from the upper part; edges of wound slightly red and tense. Carbolic dressings discontinued and boracic acid substituted. The temperature has varied from 98·4° to 100·2°. The bowels were freely open after enema on the 5th.

After the 6th the temperature became normal or subnormal, not reaching 100°, excepting during an attack of follicular tonsillitis which lasted from the 14th to the 17th, when it rose to 102·6°. There was discharge from the wound, chiefly from the situation of the cord, until nearly the end of the month, when the wound had perfectly healed. There was some slight swelling over the canal in the position of the stump of the cord when the patient left.

On leaving the hospital the patient went to a convalescent home, where he remained for three weeks, resuming work as a potter on his return to London. He was readmitted into St. Thomas's on Oct. 7th, under the care of Dr. Ord, and died on Oct. 29th. It appeared that about three months before he had suffered from constipation, and had also had some vomiting; these symptoms passed off for a time, and he does not appear to have paid much attention to them until he found a lump in his abdomen during a more severe attack, three days before admission. When under care the symptoms were constipation, vomiting, distension of the abdomen, and the presence of a large tumour in the right side and in the iliac fossa. He died from exhaustion. There was a small growth in the inguinal canal, measuring about three-quarters of an inch in diameter, a growth as large as an orange over the iliac vessels on the right side, several tumours under the ascending colon on the same side, evidently of glandular origin, and another growth behind the duodenum, adherent to it about four inches from the pyloric end of the stomach; and on examination of the mucous membrane of the duodenum it was found that the growth had produced an ulcer about two inches long. The growths on section closely resembled each other, presenting a gelatinous appearance, some being more vascular than others. These secondary growths much resembled the original one.

CASE 2.—G. G——, aged fifty-one, a sawyer, was admitted into the Albert ward under the care of Mr. Sydney Jones, April 7th, and left cured April 28th, 1884. There was no family history of tumours. The patient, a strong, healthy-looking man, had had no severe illnesses; he had not had syphilis. The patient stated that between five and six years ago he had received a severe blow from a log of wood on his right testicle; this caused considerable pain, but he was able to return to work in about half an hour. The next morning he noticed some swelling on the right side, which became considerable in about three days, and the scrotum very red. He went to Guy's Hospital, where they wished him to remain as an in-patient, but he refused. He was unable to work for about a fortnight, because of severe aching pain in the testicle. The pain then ceased, but the swelling did not diminish, and remained about the same size until a year or eighteen months ago, when it commenced to steadily increase, and that without pain, excepting from its weight, which produced aching in the loins. On examination the scrotum was found to be occupied by a large pyriform tumour, measuring from above downwards ten inches. It occupied the whole of the right side of the scrotum, and the testicle on that side could not be discovered. The left testicle was normal, and could be easily separated. The tumour was very heavy, elastic, almost fluctuating in some parts, in others hard; the swelling was not translucent. It did not involve the cord to any extent, as this could be traced into the upper part of the tumour and presented no evidence of enlargement. The superficial veins of the scrotum were much dilated. No enlargement of glands could be discovered. General health good. Sp. gr. of urine 1010; no albumen.

April 9th.—Ether having been administered, and the parts washed with carbolic solution and shaved, two curved incisions were made from above downwards, including an oval piece of the skin, and meeting at the bottom of the scrotum; the remainder of the scrotum was then dissected off the tumour and the cord freed, clamped, and the tumour removed; the cord was ligatured. The vessels, which had been secured by clamp forceps as they presented themselves in the wound, were ligatured; a drainage-tube was introduced; the edges of the wound brought together with silk and catgut, and antiseptic dressing applied; the spray was used throughout the operation. On section of the tumour the cut surface was undoubtedly of a sarcomatous character; there was some fluid, especially in the tunica vaginalis, where some nodulated growths were found in its wall, projecting from the principal one. Examination of the growth some time later proved it to be sarcomatous, chiefly small round cells. The abdomen was carefully examined whilst the man was under ether, but no enlargement of the lumbar glands could be felt.

10th.—The patient had slept fairly during the night and

was without pain. Pulse 108. The temperature on the evening of the 9th was 98·4°. The wound was redressed antiseptically; there was very little discharge. On the 10th the temperature rose to 100·6° in the morning, and to 100·8° on the 11th, but fell again next day, becoming on the 13th and after the 15th subnormal, continuing so for the remainder of his residence (it had been normal before the operation). On the 16th carbolic oil was used instead of the antiseptic dressing, and warm water dressing was substituted for this on the 18th. The wound was healed when he left the hospital, nineteen days after operation.

CASE 3.—W. W ——, aged thirty-six, a labourer, was admitted, under the care of Mr. Sydney Jones, on Sept. 22nd, and left, cured, on Oct. 8th, 1884. The family history was good; there was no history of any tumour. He had had no serious illness, and had never suffered from syphilis. He first noticed that the left testicle was enlarged a short time before Christmas, 1883; the swelling began at the lower part of the testicle, and had gradually increased in size. The growth had been unattended by pain, and had only caused inconvenience from its size. There was no history of injury. When admitted the patient was a strong, healthy-looking man, complaining only of enlargement of his left testicle; this enlargement was considerable, the swelling being very hard and lobulated at its posterior part and irregular on the surface. The hardness was almost cartilaginous in character, there was no testicular sensation, and the outline of the testicle was lost. The cord on the left side appeared larger than that on the right; the superficial veins were enlarged on the left side of the scrotum. No enlargement of the glands could be detected in the abdomen. The internal organs appeared healthy. Urine normal; sp. gr. 1015.

Sept. 23rd.—The tumour was tapped, but nothing flowed through the cannula; a little clot which remained in the end, on withdrawal, when examined microscopically, showed only red and white blood-corpuscles.

24th.—Ether having been administered, Mr. Sydney Jones removed the testicle, antiseptic precautions being adopted throughout the operation, as in the other cases. Two curved incisions were made, including an oval piece of skin, the tumour dissected out from the scrotum, the cord cleared and clamped, and the growth removed below. After this the vessels, which had been secured by clamp forceps during the progress of the operation, were ligatured, and then the vessels of the cord itself were separately ligatured. The edges of the wound were brought together by alternate silk and catgut sutures after the insertion of a drainage-tube, and the wound dressed antiseptically. Examination of the tumour showed a nodulated mass with the naked-eye characters of a sarcoma. On section there were several small cysts; the growth appeared of more recent origin in parts, and in one part it appeared as if there was some remnant of the testicle. No record of the microscopical examination was kept.

24th.—Slept after an injection of morphia, and was in no pain. Pulse 96.

25th.—Wound redressed under the spray; looked healthy.

27th.—Wound redressed; a few stitches removed. The patient complained of headache, but was otherwise well.

30th.—The wound was redressed, and all the remaining stitches and the drainage-tube removed.

After the operation, the temperature in the evening rose to 100·8°, to 100° on the following day, and to 100·6° on the day after. It did not again exceed 99·6°, becoming and continuing normal until his discharge, thirteen days after operation.

STATION HOSPITAL, HULME.

ENLARGEMENT OF THE BURSA BENEATH THE SEMI-MEMBRANOSUS AFTER INJURY; SUPPURATION EXTENDING TO THE KNEE-JOINT; ASPIRATION; AMPUTATION; RECOVERY; REMARKS.

(Under the care of Surgeon-Major G. C. GRIBBON, M.B.)

CORPORAL C——, 3rd Dragoon Guards, aged twenty-seven years, was admitted on Jan. 21st, 1884, with an obscurely fluctuating swelling on the inner and upper part of the left calf about three inches below the joint. He was employed in the saddlery workshop. Six months prior to coming under treatment his horse fell with him, and rolled over on his left leg, giving rise to considerable bruising. This passed away without any apparent ill effects, and he was able to resume his usual occupation as a saddler. Latterly, however, he had felt the left knee stiff, especially after sitting any length of time at his work, and he had got an uneasy feeling in the calf. The patient was a delicate-looking man of very strumous appearance. The left popliteal space appeared somewhat full.

Five days after admission the swelling had become more prominent and fluctuation distinct. It was rather tender, and occasional shooting pains were felt down the leg. Exploration with a fine needle showed the contents to consist of oily matter, with a few opaque streaks. Under antiseptic precautions about an ounce of fluid was evacuated through a small incision, and after a few days, during which there was a little thin oily discharge, the opening closed up. He was able to resume work on Feb. 4th. On the 17th, however, the man returned to hospital with a feeling of tightness and stiffness at the back of the knee, and some pain down the leg. There was no swelling in the calf this time, but the lower part of the popliteal space appeared fuller than normal. His general health was not good.

During the following two days the swelling increased rapidly, and as it was tense, it was again emptied, and rest and pressure employed, but without effect, for reaccumulation occurred; it was therefore determined to make a free opening and use continued drainage. This was done on March 23rd. Antiseptic precautions were used throughout.

The patient progressed satisfactorily enough for the following four days. All his discomfort was relieved, and he felt so well that, disregarding instructions to remain in bed and at rest, he got up and walked about in the hospital yard. The day was cold and damp, and on returning to his ward he felt his knee very cold and numb, and soon afterwards pain set in. Acute synovitis of the knee supervened, the temperature ran up to 103°, the febrile symptoms were marked, and the discharge from the wound became more puriform. On the supervention of inflammatory symptoms immobility was secured placing the limb in a long back splint with heel-piece. Cold, leeches, &c., were used, but to no avail. The synovitis became evidently suppurative.

On April 18th the joint was aspirated, and 4 oz. of healthy pus removed. This procedure, it was intended, should be merely preliminary to freely opening the joint and securing free drainage; but the relief given was so great that the latter operation was postponed, in the hope that repeated aspiration might prove effectual. Mr. Heath, Senior Surgeon to the Royal Infirmary, Manchester, thought similarly. He informed Surgeon-Major G. C. Gribbon that in a case under his care of acute suppuration of the joint aspiration had resulted in complete recovery (THE LANCET, Sept. 4th, 1880, p. 379). After each aspiration relief was experienced, and the febrile symptoms were temporarily allayed. The joint looked a little puffy, but there was no pain, and but little tenderness present. After ten days, however, the symptoms, indicative of progressive inflammatory mischief, recurred with severity. Hectic became marked, and the patient was much reduced and exhausted. The joint became more painful, with startings on the slightest movement, and slight œdema of the thigh appeared. As suppuration was undoubtedly extending along it, amputation of the thigh was decided on, and performed on May 9th. The patient made an excellent recovery. Examination of the joint presented the usual features of a destructive inflammatory process. The synovial membrane was thickened and softened, and the articular surfaces were eroded circumferentially. Subchondral caries allowed of easy removal of what remained, which was soft and discoloured. The periarticular tissues were swollen and infiltrated, and collections of pus were found extending along the muscles of the thigh. The opening made early in the case behind the joint could only be traced for an inch inwards. No communication through it with the joint could be made out.

Remarks by Surgeon-Major GRIBBON.—Cases of enlargement of the bursa under the semi-membranosus are not uncommon, but one of so active a kind as in the present case is, I think, exceptional. That the swelling first observed on the calf and afterwards in the lower part of the popliteal space was from inflammation of this bursa is hardly doubtful. In the place where it first showed itself—i.e., the calf—the case resembles some of those published by Mr. Morrant Baker in the thirteenth volume of St. Bartholomew's Hospital Reports under the title of "Synovial Cysts

of the Leg in connexion with Disease of the Knee-joint," but his are all connected with chronic disease and a result of it, whereas in this the swelling preceded the joint affection and became the predisposing cause. Perhaps the most interesting point in the case is whether there was any communication between the bursal swelling and the joint. Such a communication is said to exist in one out of every five cases. Here it was impossible to say, for though none could be detected on examination of the limb after amputation, it is far from improbable that it might have existed, but got blocked by the inflammatory processes going on near it. It is clearly important that this communication should be borne in mind in the treatment of enlargements of bursæ in close relation to joints. The treatment by incisions, after the valvular method of Abernethy and with antiseptic precautions, proved safe but inadequate. The free opening of the sac promised well until the patient's indiscretion subjected him to the acute inflammatory attack which ultimately destroyed the entire joint.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Annual General Meeting.—President's Address.

THE annual general meeting of this Society, for the election of officers and other members of the Council for the ensuing year, was held on Monday last, Dr. George Johnson, F.R.S., President, in the chair. The list of officers for the ensuing year was given in our issue last week.

Dr. DOUGLAS POWELL read the report of the President and Council, which showed that fourteen Fellows had died during the past year, including Dr. Allen Thomson, an honorary Fellow, and Dr. Samuel Gross, a foreign honorary Fellow. During the past year thirty-one Fellows had been elected. The total number of Fellows at the present time was 731. The report showed further that the average attendances at the meetings of the Society compared very favourably with those of the past years. The number of works in the possession of the Society was 29,222. An endeavour had been made to increase the number of engravings in the possession of the Society. Dr. Blandford had kindly undertaken to edit a catalogue of the Society's large collection of engraved portraits of members of the medical profession.

Dr. ALTHAUS moved that the report of the President and Council, together with the balance-sheet of the treasurer, be received, printed, and adopted.

Dr. BERNARD O'CONNOR seconded the motion.

Mr. COOPER FORSTER, as treasurer, made a few explanations connected with the balance-sheet.

The PRESIDENT then read the annual address, which was chiefly composed of obituary notices of deceased Fellows—viz., six resident Fellows—Dr. Barclay, Mr. Fairlie Clark, Dr. B. Baxter, Dr. A. King, Sir Erasmus Wilson, and Mr. Cæsar Hawkins; and six non-resident Fellows—Dr. S. Denton, Mr. Arnold, Mr. J. S. Daniell, Dr. W. Corley, Dr. Lashmere, and Dr. Worthington, and two honorary Members, Dr. Allen Thomson and Dr. S. Gross, had been erased from the muster-roll of the Society by the hand of death. After giving very full accounts of the more eminent of the deceased Fellows, the President made a few retrospective and prospective remarks on the work of the Society, which showed clearly that the papers and discourses thereon, were in no danger of falling off. Allusion was made to the improved state of the drainage of the Society's premises, and the President suggested that a more efficient method of ventilation might be adopted for the room in which the meetings were held.

Dr. WILSON FOX proposed and Dr. BUZZARD seconded a vote of thanks to the President for his address.

The vote of thanks to the retiring members of the Council was proposed by Dr. CHOLMELEY and seconded by Mr. VICTOR HORSLEY.

Dr. GERVIS and Dr. LEGG officiated in the vote of thanks to the retiring treasurer, Mr. COOPER FORSTER.

The vote of thanks to Mr. Berkeley Hill, the retiring secretary, was composed by Dr. DYCE DUCKWORTH, seconded by Mr. R. W. PARKER, and carried with acclamation.

PATHOLOGICAL SOCIETY OF LONDON.

Rhino-scleroma.—Sarcomata of Bladder.—Congenital Obstruction of Intestine.—Adeno-sarcoma of Pineal Body.—Fractures of Hyoid Bone and Larynx.—Tubercular Pyo-Salpinx.—Peculiar form of Nephritis.

AN ordinary meeting of this Society was held on Tuesday last, Dr. J. S. Bristowe, F.R.S., President, in the chair.

Dr. PAYNE and Dr. SEMON read a conjoint paper on a case of Rhino-scleroma which they had shown to the Society on Oct. 21st. 1884. Drawings and microscopical specimens were also shown. The patient was a Guatemalan, aged eighteen, who had suffered for four years. The disease began insidiously. Two rounded, reddish, firm swellings, each about the size of half a hazel nut, ulcerated on the surface, were situate below the nostrils; both nostrils were filled with similar masses. The bridge of the nose was considerably broadened, and on pressing it below the bones gave a sensation of stony hardness. Galvano-cauterisation was said to have caused the ulceration. The uvula had entirely disappeared. Upon the soft palate an irregular, raised, whitish, slightly ulcerated patch was seen. The palate had undergone considerable cicatricial contraction, fibrous bands running from the ulcerated patch in all directions, and greatly distorting the parts. Similar morbid changes were visible on the left tonsil and left lateral wall of the pharynx. The larynx and naso-pharyngeal cavity were unaffected. The patient was extremely anxious to have some operation performed, which should remove the external disfigurement and the impediment to breathing through the nostrils, although the impossibility of a radical cure, and the improbability of a lasting improvement, were strongly represented to him. Before proceeding to operative measures, energetic anti-syphilitic treatment was had recourse to, and continued for some months, but without any result. The day after he had been shown to the Society he was put under chloroform, the external tumours and the masses blocking the nostrils were radically scooped out with the sharp spoon, and the exposed surfaces on this and the following days freely cauterised with lunar caustic. In spite of these precautions, two months after the operation unmistakable signs of recurrence made their appearance. Further operative interference was declined, as apparently useless, and the patient was lost sight of. It was found that the greater part of the septum nasi had entirely disappeared. As no trace of bone was detected in any of the numerous sections which were made, it could only be assumed that the partition had been destroyed by the progress of the growth. The histological examination showed the skin and, in the upper parts, the mucous membrane to be invaded by a small-celled growth, resembling granulation tissue, with an admixture of some larger cells of a different form. The epidermis was also altered in a peculiar manner, producing concentric masses, with some resemblance to the "nests" of epithelioma. There were also firm masses of fibrous tissue. The whole structure was entirely different from epithelioma or sarcoma, or any other definite tumour formation, but formed a growth more resembling the granulation tumour, such as lupus, syphilis, tubercle, than anything else, though quite distinct from any of these. It was remarkable for the absence of any evidence of atrophy or degeneration. The histological appearances were, in the main, the same as have been observed in all cases of rhino-scleroma, though these appearances have been differently interpreted by different observers. This is believed to be the first case of this rare disease ever described in this country; and no other case but this has been described in France. In Germany (out of Austria) the disease is equally unknown, most of the reported cases having come from Vienna; a few had been seen in Italy.—Mr. BUTLIN asked whether any parasite had been found.—Dr. PAYNE replied that micro-parasites had been found, but not in the present case.

Mr. EVE showed two specimens of Sarcoma of the Bladder. The first specimen was a firm pale lympho-sarcoma, which occupied the anterior and upper walls of the bladder, which it fixed, except an elongated space, one inch in width, at its lower and posterior part. The greatest thickness of the tumour was three inches and a half; its free surface was not papillary. Microscopically, the tumour was composed of lymphoid-like round cells, forming ill-defined masses and groups in a scanty fibrous stroma, and

lying in the meshes of a reticulum of hyaline fibrils. The specimen was taken from a man aged sixty-eight, who suffered for two years from pain in the loins and slight hæmaturia. This bladder was several times sounded for stone. The second specimen was a mixed and probably myo-sarcoma of the bladder, forming a firm fibrous tumour, about an inch and a half in length, and situated within the left wall of the organ just above the ureter. It projected externally from the bladder wall, but the corresponding under-surface was unaltered, with the exception of a slight superficial erosion. Under the microscope, sections showed bundles of unstriped muscle fibre separated by tracts of connective tissue; the bundles were infiltrated with round and elongated nuclei, and with large spheroidal cells possessing a large nucleus, surrounded by a rim of clear protoplasm; the latter formed in parts small ill-defined groups in the muscular bundles, and in the connective-tissue, or were diffusely scattered. Indications of a new formation of unstriped muscle fibre from elongated nuclei were observed in many places. The bladder was taken from an elderly lady, but no clinical details of the case had been obtained.—Mr. H. T. BUTLIN agreed that the first specimen was one of lympho-sarcoma. With regard to the second specimen, he suggested that it might have originated from the prostate gland. He referred to a contribution by Dr. Coupland, which showed that true sarcoma of the bladder had been observed. He said that Mr. R. Williams had thought that sarcoma of the bladder was not so very uncommon, but that out of all the cases of vesical tumour recorded by Sir H. Thompson every tumour was found to be epithelioma or papillary tumour by Dr. Gibbes, and not one sarcoma.—Mr. BOWLBY said that he had seen at St. Bartholomew's Hospital recently two cases of sarcoma of the bladder, both of which had been under the care of Mr. Morrant Baker. Both occurred at about the age of forty. One case was that of a woman. The tumour was a mixed-celled sarcoma. The case of the man was first seen for dysuria. Though an operation was performed, yet extension of the growth and exhaustion led to death. The autopsy revealed the tumour in the bladder, which was of the mixed-celled variety. The growth did not affect the glands in either case, and he asked whether these structures were involved in Mr. Eve's cases.—Mr. EVE, in reply, said that he considered the second tumour could not have originated in the prostate. He had not made the autopsy and could not therefore answer Mr. Bowlby's question.

Dr. HORSON showed a specimen of Congenital Obstruction of Intestine taken from a male infant less than three days old. The child was a seven months' one, and during life had vomited greenish coloured fluid. The rectum was imperforate. There was no evidence of recent peritonitis at the autopsy, but there were numerous delicate bands. The whole large intestine and lower sixteen inches of the small intestine resembled a solid tube a quarter of an inch in diameter, filled with semi-solid mucous matter; above this the bowel was dilated. A break in the continuity of the intestine occurred at a point just opposite to the occlusion, the mesentery being complete. The peritoneum, especially near the gap, was much pigmented. The mother stated that when five months pregnant she had had a violent fit of coughing which caused her great pain in the abdomen, and he thought that at this moment, either by the forcible bending of the fœtus itself or from some other cause, a rupture of the bowel had taken place, and that consequent inflammatory action had obliterated the gut at the opposite end of the loop.

Dr. CHARLEWOOD TURNER read a paper on a specimen of Adeno-sarcoma of Pineal Gland. The tumour had a nodulated and rounded flattened oval outline, and was about the size of a kidney. It filled and distended the left lateral ventricle, and the third ventricle, and had destroyed the corpus callosum. The tumour was found to have flattened the left optic thalamus, and to have pressed upon the corpora quadrigemina. A careful examination proved that the tumour had originated in the pineal body. The growth had extended forwards in the direction of least resistance into the third and lateral ventricles. The microscopical sections showed a lobulated structure separated by bands of fibrous tissue of loose structure, which contained elongated and angular cells, which stained with carmine. The lobulated portion showed a reticulum of spindle-celled sarcomatous structure, which was traversed by tracts of adenomatous growth. Cells having the character and arrangements of sarcoma and carcinoma were found distributed through the growth. Virchow had described hyperplasia of the pineal gland. Wilks and Moxon had described cystic tumours of this body. Dr. Turner dwelt at considerable length on the pathology of morbid growths. Dr. Hale White said that tumours of the pineal gland though rare had yet been found in every variety. A writer in Virchow's *Archiv.* had described cartilaginous and other kinds of tumours.

Mr. ARBUTHNOT LANE read a paper on Fracture of the Hyoid Bone and Larynx. He had seen nine instances out of 100 bodies examined in the dissecting-room. He said that Mr. Durham had collected seventy-five recorded cases of fractures of the larynx and hyoid bone, of which fifty-nine proved fatal. Fischer's statistics of fractures of the hyoid bone alone showed twelve deaths in twenty-three cases; so that out of a total of eighty-two cases of fracture of the larynx and of the hyoid bone, twenty-eight only recovered, or one-third of the total number. If the statistics given be correct, there must necessarily occur among every 100 people of the pauper class at least twenty-seven fatal cases, which proportion is absurd. Mr. Lane described (1) ununited fracture of the right great cornu of the hyoid bone (Pathological Society's Transactions, 1884); (2) fracture of the right great cornu, with ununited fracture of both superior cornua of the thyroid cartilage, with much separation of the fragments; partial dislocation of the lower cornu, deformity of cricoid cartilage, probably the result of fissuring (Pathological Society's Transactions, 1884); (3) fracture of the right upper cornu of the thyroid cartilage with bony union, and ununited fracture of the left upper cornu with much separation of the fragments; (4) fracture of the right upper cornu of the thyroid cartilage, no separation of fragments, fibrous union and probable fracture of the left upper cornu with bony union; (5) fracture of the right upper cornu of the thyroid cartilage with bony union; (6) fracture of the right cornu of the hyoid bone, chondritis of the thyroid cartilage, probably primary suppuration of both laryngeal glands; (7) fracture of the right upper cornu of the thyroid cartilage with much separation of fragments, fracture of the left upper cornu with fibrous union, no separation of fragments, cricord cartilage fractured in front to the right, considerable displacement of fragments with bony union, and fissure in front and to the left; (8) fracture of the left upper cornu of the thyroid cartilage with fibrous capsule; (9) fracture of the left upper cornu of the thyroid cartilage with fibrous union, no separation of fragments, and probable fracture of the left great cornu of the hyoid bone. Cricoid fractures are, as a rule, fatal. Gurlt found no difficulty in fracturing the thyroid cartilage in elderly subjects by backward pressure with both thumbs. Keiller, Cabasse, and Helwig had experimented on the subject with varying success in producing fracture; the age of the cartilage had something to do with the result. Mr. Lane found that fracture of the upper cornua of the thyroid can be produced with comparative ease by compressing the larynx by the hand and then exerting force backwards. If the perichondrium were torn, there was considerable separation of the fragments. He found that the cartilage of later adult life yielded more readily than that which had undergone ossific change.—Mr. BLACK asked whether there was any possibility of the fracture of the cornu of the thyroid cartilage being confounded with normal appearances, for there was normally a detached portion of cartilage in the thyro-hyoid ligament.—Dr. SEMON said that fractures of the larynx were supposed to be amongst the rarest affections of the larynx. If Mr. Lane's propositions were true, then we must alter our opinions of the fatality of fractures of the larynx. He (Dr. Semon) had recently collected cases of fracture of the larynx, and found that three-quarters of them were fatal.—Mr. LANE, in reply, said that most of the fractures occurred near the base of the thyroid cartilage, and he was well acquainted with the normal structures.—Mr. SHATTOCK said that not uncommonly the body of the hyoid bone articulated with the cornu by a false joint; in his opinion one of Mr. Lane's specimens of fracture was of this nature. The acromion articulated with the spine of the scapula by a kind of false joint at times, and this was a fact analogous to what was seen in the hyoid and its cornu.—A committee of Mr. Lane, Dr. Semon, Mr. Shattock, and Mr. Butlin was appointed, at the suggestion of the President, to inquire into the true nature of Mr. Lane's specimens.

Dr. QUARRY SILCOCK showed a specimen of Tubercular Pyo-salpinx taken from a female child aged five years, who was admitted into St. Mary's Hospital for tubercular

meningitis. At the autopsy the signs of a general tuberculosis were present which involved the cord and brain. The great omentum was adherent to the abdominal wall. There were signs of subsided peritonitis. Miliary bodies were scattered over the walls of the intestines. The Fallopian tubes and body of the uterus were distended with caseous matter; the distension was greatest near the fimbriated portion of the tubes, and was especially so on the right side. The uterus was adherent to the posterior wall of the bladder, and a condition of acute anteflexion seemed to be set up thereby. The cervix was healthy. The body of the uterus was largely distended with caseous matter. He showed the specimen as one of rarity in a child, though such cases were not uncommon in the adult. The uterine walls were hypertrophied, and this was possibly due to the efforts made to empty the cavity of its contents. There were no signs of vulvitis, and there was no history of such an affection.—Dr. GRAILY HEWITT concurred in the view Dr. Silcock had taken. The strong fibrous adhesions, no doubt, caused acute anteflexion, which had been of some standing. Had the patient lived this condition of anteflexion would have continued throughout life. With regard to the presence of distension of the body of the uterus, he thought such a condition might lead to distension of the Fallopian tubes, which was a subject that had received comparatively little attention. The state of the uterus might have been brought about by the obstruction to the outflow of the material owing to the strongly anteflexed condition of the organ.—Dr. A. MONEY had met with two specimens of caseous disease of the body of the uterus and Fallopian tubes in children aged about five years. These cases are recorded in the post-mortem records of the Hospital for Sick Children.—Dr. SEYMOUR SHARKEY questioned whether this condition was a rare one. He had seen several specimens in the adult. In a case of stricture of the intestines which he had shown to the Society there was caseous disease of one of the Fallopian tubes.—Mr. EVE also said that he had recently seen two cases of this affection within a short space of time.—Dr. CARRINGTON said that the disease was not uncommon in the adult, though it might be rare in children.—Dr. HADDEN said that various degrees of the disease were to be met with in the adult, and Dr. K. Fowler had shown that the affection was by no means rare.—Mr. SHEILD said that some cases were not of a true tubercular nature, but were the result of disintegration of the caseous products of suppurative inflammation.—Dr. PERCY KIDD had seen only two cases of tubercular disease of the body of the uterus out of 200 autopsies on cases of phthisis in the adult. Disease of the Fallopian tubes was much more common.—Dr. GOODHART said that he had tabulated the results of an experience of ten years, and found that he had seen seven cases of tubercle of the Fallopian tubes; twelve cases of suppuration of these parts; eight of cystic disease, and seven of adhesions. The body of the uterus was but seldom affected by tubercular disease, and he had seen only two or three such cases. In his opinion suppurating cases had been mixed up with tubercular ones.—Dr. BRISTOWE said it was plain that the disease was relatively common, and he had recorded a few instances in the earlier volumes of the Transactions of the Society. He was perfectly certain that the disease might exist without giving rise to symptoms during life. Probably the organs were affected as a part of the general disease.—Dr. SILCOCK, in reply, said that he merely contended for the rarity of the disease in children. He had not been able to find the bacilli in the caseous matter of the organs affected, and Mr. Watson Cheyne had informed him that degeneration of the products might explain this want of success. Distension of the body of the uterus was not necessary to the production of a similar condition of the Fallopian tubes. In a post-morten examination of a case of abortion he had found pyo-salpinx without disease of the fundus of the uterus, so that the distension of the fundus was not necessary to the production of pyo-salpinx.

Dr. HALE WHITE showed specimens of a peculiar form of Acute Nephritis. The kidneys were taken from a man who was brought into Guy's Hospital in an unconscious condition. Twelve days before admission he had been knocked down by a cart, since then he had been ill; he was found in an unconscious state in the streets. On admission he was comatose, with stertorous breathing. There was no paralysis and no cardiac murmur. The urine was bloody. He soon died in the comatose state, during which an occasional convulsion was noticed. Croton oil and pilocarpin had no effect. At the autopsy there was no dropsy, sores, scars, or signs of injury, and no evidence of pyæmia. The bladder and urethra were healthy. The only abnormality of any importance was the condition of the kidney. The two were exactly alike, very bulky, firm, and weighed nineteen ounces together. The pyramids were very dark; there was no evidence of chronic Bright's disease. Projecting here and there on the surface were whitish patches, a little raised about the size of a split pea, and looking something like abscesses. Section of the kidney showed these patches to be most numerous in the medullary part. The largest was half an inch in diameter. Each had two zones, an outer crenated one of a pale yellowish-white colour with a greyish tint at its exterior, and an inner dark-brown zone, sometimes breaking down to pus. The kidney structure around each patch was red and inflamed; this inflamed part was sharply marked off from the healthy kidney substance. Those patches in the medulla were triangular with the apex towards the pyramid, and radiately striated in appearance. The diseased spots in the cortex were circular. The pelvis of kidney was normal. Microscopic examination showed that there was slight epithelial and interstitial nephritis. The part which to the naked eye was abnormal showed a large number of pus cells between and in the tubes; the whole had a broken-up appearance, bits of tubes being here and there visible among the pus cells; sometimes this process had extended far enough to form a definite abscess. The great rarity of this condition was pointed out. It was not scarlatinal, nor was there any history of scarlet fever; it could hardly be due to the injury; there was no evidence of pyæmia anywhere in the body, nor was there anything to suggest "surgical" kidney.

The following card specimens were shown:—Mr. Eve: Enchrondroma of Pelvis, and a recent specimen of Colloid Disease of Omentum. Dr. C. Turner: Necrosis of Renal Pelvis. Dr. Silcock: Croupous Enteritis of Ileum. Mr. John Poland: Ununited Fracture of Internal Condyle of Humerus. Mr. Jonathan Hutchinson, jun.: Lupus Lymphaticus. Dr. Beevor: Nerve Tissues stained by Weigert's new Method. Mr. Marmaduke Sheild: Tumour of Humerus. Mr. Gross: Œsophagus and Parts from a fatal case of Sword-swallowing. Dr. Hale White: A living specimen of a Cryptorchid.

CLINICAL SOCIETY OF LONDON.

Locomotor Ataxy without Disease of the Posterior Columns of the Spinal Cord.—Arrested Rickets.—Nephrolithotomy.

AN ordinary meeting of this Society was held on Feb. 27th, Mr. Thomas Bryant, F.R.C.S., President, in the chair. The first paper elicited considerable discussion, in which Dr. Wilks and Dr. Bristowe joined.

Dr. A. HUGHES BENNETT read notes of a case of Locomotor Ataxy, without Disease of the Posterior Columns of the Spinal Cord. The patient, a man aged forty-eight, suffered from all the usual symptoms of locomotor ataxy, including incoördination of movement, without loss of muscular power, a typical ataxic gait, Romberg's symptom, impaired and retarded sensibility of the lower extremities, lancinating pains, and loss of the knee-jerk phenomena. After death evidences of general acute cerebritis were found with patches of recent softening. In the medulla oblongata there was a mass of sarcomatous infiltration occupying its posterior and central aspects; with the exception of one anterior cornu in a limited portion of the lumbar region, the cord was perfectly normal throughout, as were also the posterior cornua and roots within the circle of the spinal membranes. Outside these the posterior roots in the dorsal and lumbar regions were found involved in a mass of sarcoma, which extended as far upwards as the cervical portion of the cord. In the lumbar region the anterior roots were implicated, but only to a very limited degree. Microscopical preparations and drawings illustrating these facts were shown at the meeting. In commenting on this fact special attention was directed to the pathological and clinical phenomena. It was pointed out that the patches of central softening were probably quite recent, and due to the acute cerebritis which supervened shortly before death. The sarcomatous growth in the medulla was stated to be a rare pathological condition; and the absence of pronounced bulbar symptoms was explained by the supposition that the morbid material had infiltrated the normal structure without

causing serious degeneration. Although one anterior horn was implicated, and some of the anterior roots slightly involved in the disease, it was evident that this had caused few symptoms during life, as the motor power was unimpared, there was no muscular wasting, and the reflex reactions were normal. The clinical point illustrated by this case, to which it was the object of the paper especially to direct attention, was the relation which existed between the spinal symptoms and the lesions in the posterior roots of the cord. It was pointed out that the patient during life suffered from all the prominent symptoms of tabes dorsalis, and presented a fairly typical clinical picture of what we understand of that disease. It was then stated that the universal belief is that the essential lesion of locomotor ataxy is sclerosis of the posterior root-zones of the cord. In the case under consideration there was no trace of disease of any portion of the posterior columns, proving that for the production of ataxy degeneration of the cord is not an essential factor. Reference was made to the cases published by M. Déjerine, in which there were all the symptoms of tabes, and after death only parenchymatous neuritis of the peripheral nerve-endings was found, the cord, roots, and nerves being intact. From this it was maintained that interruption of the different paths at the periphery was capable of causing ataxy in as characteristic a manner as when these tracts were diseased in the cord. The case under notice shows that lesion of a third locality may produce the same effects—namely, at the posterior spinal roots. It was asserted that this was a pathological confirmation of the experimental researches of Van Deen and Claude Bernard, who by dividing the posterior roots induced incoördination of movement without motor paralysis. It supported the view that those elements which convey the impulses regulating coördination are situated in the afferent paths of the nervous system. Whatever theory be advanced to explain the physiology of locomotor ataxy, this serves to show that the point at which, in the causation of the phenomena, the nervous path is interrupted, need not of necessity, as is generally asserted, be primarily situated in the posterior root zones of the spinal cord. Reflection on this fact suggests that we have not yet fathomed the anatomical substratum of that protean disorder which we at present recognise under the term "tabes dorsalis." This assemblage of symptoms probably consists of a combination of different pathological conditions, many of which are represented by phenomena common to all, and each of which may in time be differentiated. It is possible that a case such as the present may prove a link in the chain of discovery.—Dr. SAMUEL WILKS said that the case afforded another proof of the proposition that the pathology of the disease was still unknown. He had seen cases having many of the symptoms of locomotor ataxy end in recovery. With respect to the "classic lesion" of tabes dorsalis, he thought there had been but few cases brought forward corroborative of the dictum of Pierret, that the disease was limited to the posterior root columns of the cord. Cases of sclerosis of the whole of the posterior columns had been recorded in this and other countries. He thought that cases of tabes dorsalis were discussed too much from a physiological rather than clinical or pathological point of view, and he ventured to assert that we were not in a position to discuss the subject from this point of view. Many views had been held of the pathology of tabes dorsalis; cutaneous anæsthesia, loss of muscular sense, and other physiological disturbances had been put forward as the cause of locomotor ataxy. He considered that we had not yet got to the real source of the pathology of locomotor ataxy. He ventured to say that we were too apt to follow the French, and to accept their teachings without sufficient examination. He could not think that the pathological condition of sclerosis of the posterior root zones was sufficient to give rise to every possible symptom of nervous disease. There was not an organ in the body which could not be diseased in tabes dorsalis, and he did not think that such a protean affection could be due to disease of the posterior root columns.—Dr. ALTHAUS said that in general paralysis of the insane the pupils were unequal, whilst in locomotor ataxy the pupils are equal, with a very few exceptions. He considered that Dr. Bennett's case was one of an exceedingly rare condition, for sarcoma was said by Virchow to be of great rarity in the spinal cord. Much speculation had been made concerning the symptoms to be attributed to disease of the posterior roots, and he agreed with Dr. Wilks that we had still much to learn. The duration of Dr. Bennett's case was very brief; locomotor ataxy lasted even as long as twenty-five years, and then the patient died of a complication rather than of the disease itself. He could not follow Dr. Wilks in regard to the belief that cases of recovery from locomotor ataxy could not be due to sclerosis of the posterior columns. Such cases may recover from the clinical symptoms, whilst they continue to have the disease of the posterior columns. He referred to cases which had been recorded in which sclerosis of the entire extent of the posterior columns was found, the patient having died of another disease. He considered that a vicarious action of other parts of the spinal cord could supply the lost functions.—Dr. C. TURNER had made an autopsy and microscopical examination of a case which died at an early stage, which was probably one of commencing sclerosis. There was exudation in the central parts of the posterior columns between the columns of Goll and the root-zone. The serous or albuminous exudation was very extensive. The patient had had some symptoms of tabes dorsalis, such as ataxic phenomena and ocular symptoms. Death followed tracheotomy, which was performed for some laryngeal trouble. He had also seen a case somewhat similar to that of Dr. Bennett's. There was a growth in the fourth ventricle which encroached on the cerebellum; many tumours were disseminated down the spinal cord; in parts the new growths had invaded the posterior columns of the cord. There was loss of reflex action in this case, which occurred in a child. He thought that the occurrence of these exceptional cases did not throw any doubt on the ordinarily accepted views of the pathology of tabes dorsalis. Disease at any part of the course of the circle might give rise to similar groups of symptoms, so that there was nothing strange in the occurrence of the phenomena when the peripheral nerves were alone affected.—Dr. BEEVOR said that Dr. Bennett's case bore on the question whether the disease begins primarily in the nerve tubules or whether it begins in the neuroglia. The growth evidently began outside the nerve tubules, and these were secondarily damaged. In a specimen which he had examined the nerve tubules were seen to be surrounded by a very thick band of fibrous tissue. The pains were probably due to the nerve tubules being compressed by the sclerotic tissue. Cases had been recorded by Buzzard and Adamkiewicz in which the bloodvessels were the primary seats of disease.—Dr. HADDEN said that in cases of alcoholic paralysis symptoms of tabes dorsalis may be present. Dr. Wilks had described cases of alcoholic disease which were very like those of ataxy. He (Dr. Hadden) had reported two cases of alcoholic paraplegia in which there were very marked changes in the peripheral nerves, but none in the spinal cord. The paralysis of the third or sixth nerve could hardly be due to disease of the posterior root zones. He mentioned a case which he had lately seen in which locomotor ataxy was diagnosed by many physicians. At the autopsy sclerosis of the columns of Goll, and symmetrical sclerosis of the lateral columns, were the lesions found. Optic nerve atrophy was also present.—Dr. BRISTOWE thought that Dr. Bennett's case helped to throw a good deal of light on the pathology of tabes dorsalis, for it seemed to show that in the posterior roots there must be all those elements which entered into the formation of the postero-external columns of the cord. The pupils were unequal perhaps in the majority of cases of locomotor ataxy which he had observed. He had never seen recovery of a case of undoubted locomotor ataxy, though he had seen cases in which symptoms which might be mistaken for those of tabes dorsalis have disappeared. He narrated the case of a middle-aged woman who suffered from severe headache, giddiness, and double vision, with staggering gait; there were attacks of profound nausea without vomiting; paralysis of both external recti, of the right internal rectus, and of the portio dura was present. There was also paralysis and tingling of the right arm, with stiffness in the legs, the reflexes of which were exaggerated, and ankle clonus could be obtained. The patient also became colour blind, and there was contraction of the field of vision. The illness had lasted from three to four months, when gradually first one symptom and then another disappeared. Now this happened two years ago, and the patient was still well and performing her accustomed duties.—Dr. WILKS said that cases of organic disease of the central nervous system were treated by the usual remedies, and yet when one was cured, then we believed that the diagnosis was at fault.

Dr. BENNETT briefly replied.

Dr. SEYMOUR TAYLOR related the case of Arrested Rickets shown by him at the last meeting. The patient, aged six, came under notice in June, 1884. He is the twelfth child out of sixteen, and was born at term. His parents are healthy and temperate. His brothers and sisters enjoy good health, but two sisters are "knock-kneed." His mother dates his illness from a fall from his cot when a year and a half old. Subsequently he was treated by different practitioners for bronchitis and also "enlarged liver," and there was also at that time a history of laryngismus stridulus and profuse sweatings, especially about the head. The child now presents the typical pigeon breast, with beading of the sternal ends of the ribs. He has chronic bronchitis. The heart is depressed and pushed towards the right side. There is no cardiac murmur. He is stunted in growth; the limbs are shortened with marked curvatures of bones; he is "pot-bellied," and the spine is curved to the right; the fontanelles are closed; the frontal bone is "prow-shaped"; the girth at the occipital protuberance is 20¾ in. As regards the causation of the disease in this case, there is a remarkable absence of the recognised influences. He was born and reared in fairly healthy surroundings. His parents are healthy, but his mother has borne children very fast (sixteen in twenty-two years), but has had no premature nor stillborn children. This child is the only weakly one in the family. The injury to the child from a fall is interesting, as showing what may be the starting point of the disease in a child predisposed to rickets.—Mr. R. W. PARKER thought that there was no doubt that a large percentage of rickets became arrested, and it was not uncommon for all traces of the disease to disappear. It occurred to him to ask whether this case was one of arrested rickets. The extreme stunting and deformity at such an age seemed to him to point to the conclusion that a dyscrasia was still present, and he suggested seaside treatment, with systematic shampooing and gymnastics.—Dr. CHARTERS SYMONDS said that the case seemed to him to be one rather of continued than arrested rickets. He referred to a case of juvenile osteomalacia, which Mr. Davies-Colley had placed on record, and which somewhat resembled the present one.—Dr. ANGEL MONEY thought a paper by Dr. J. S. Bury of Manchester, on Osteomalacia in Rickets, had not received the attention it deserved. It was read at the British Medical Association in July, 1883.—Dr. SEYMOUR TAYLOR said that the patient had been treated by gymnastics and shampooing, and he hoped to continue this mode of treatment systematically.

Dr. CHARTERS J. SYMONDS read a paper on a case of Nephro-lithotomy. It was that of a man, aged fifty, who had suffered for twenty-four years from left renal colic. The attacks occurred at varying intervals, and lasted from a day to a week. During the last four years this pain had nearly left him, and his health improved. Seven months ago micturition became frequent, and three months later blood appeared in the urine, in amount sufficient at times to obstruct the urethra by the coagula. Blood generally appeared after working, particularly gardening, and he had a dull pain in the left loin. No tumour could be felt. The case being under Dr. Mahomed's care, Dr. Symonds was called to see him, and it was decided to cut down on the left kidney. This was done on July 11th, 1883, the incision being parallel and close to the last rib. The lower end of the kidney was first isolated, and at once a stone was felt fixed in the commencement of the ureter. The tissues were scratched through with a director, but on enlarging the opening the stone fell back into the pelvis of the kidney, which was greatly dilated. Finally the cortex was cut into, the finger introduced, and the stone removed. Very little bleeding followed. The operation was performed antiseptically, and by the 20th the wound had entirely closed. Attention was directed to the importance of isolating the lower end of the kidney first and examining from the anterior surface, in the way pointed out by Mr. Howse; also to the rapid union which followed, notwithstanding the amount of injury inflicted upon the kidney. In the subsequent history of the case, it was stated that six months after there still remained some blood in the urine, that the pain still continued to some extent, and it was feared that a calculus existed in the other kidney. When last heard of, Nov. 10th, 1884, the man was free from pain except when he over-exerted himself. The urine contained pus and some blood.

Mr. HENRY MORRIS read a paper on a case of Nephro-lithotomy. The patient, aged twenty-four, a jeweller, was admitted under Dr. Powell into the Middlesex Hospital on April 10th, 1884, suffering from symptoms of calculus in the left kidney. Since his schoolboy days he had complained of pains in his loins, but in spite of this he had enjoyed fairly good health until about two years ago, when he was attacked by "kidney complaint." This came on without any assignable cause, and was chiefly marked by pains in the left loin, shooting down at times to his left testicle. For three weeks before admission these pains had been too severe to permit of his working, and he attended during this period at the out-patient department. On admission he had pain in his left renal region, and tenderness on deep pressure in the left loin. His urine was neutral, of sp. gr. 1010, and contained blood and triple phosphates. There was frequency of micturition, though the urine was stated to be somewhat deficient in quantity. Five days after admission, however, it was noted that the average daily quantity of urine voided had been forty-five ounces. From April 10th to 25th the pain was diminished and inconstant; but there was still tenderness on deep pressure in the left lumbar region. When the pain occurred there was retraction of the testis. Moreover, the left testis was discovered to be much atrophied. The urine at this time was acid, sp. gr. 1024, and contained a trace of albumen due to the presence of pus. Nephro-lithotomy was performed on May 10th, 1884. A calculus was felt by the finger on the front of the kidney near the inner border and below the hilus. Digital examination of the posterior surface and acupuncture of the kidney had previously failed to detect it. The sensation communicated to the finger by the calculus through the renal substance was simply that of increased induration, as compared with the resistance offered by the rest of the kidney. [illegible] his finger-nail Mr. Morris scratched through the renal tissue covering the calculus, and thus verified the nature of the induration; then with a bistoury he incised the inner free edge from the posterior surface, and partly by pushing the calculus with the left index finger (which was kept all the while in front of the kidney) and partly by the aid of a narrow curette the stone was dislodged and removed. There was no hæmorrhage of any moment from first to last. A large drainage-tube was introduced into the wound, but not into the kidney; the edges of the wound were held together by sutures; and terebene oil on lint and a thick layer on cotton-wool were retained over the wound by a tight bandage. The operation was performed at 2 P.M. At 1 P.M. he had micturated for the last time before the operation, and no urine was passed, after the operation, by the penis until 7.30 A.M., on May 11th, when fifteen ounces of lightly blood-stained urine were voided naturally. At noon on the same day (May 11th) nine ounces more were voided, so that twenty-four ounces were passed naturally in the first twenty-four hours after the operation. The dressings were changed once in the evening of the day of operation, and three times on the following day, but on May 12th there was so little discharge from the wound that this frequency of dressing was considered quite unnecessary. Urine had, in fact, ceased to pass by the wound. During the second period of twenty-four hours the urine was passed as follows:—May 11th: 2.50 P.M., 4 oz.; 5 P.M., 4 oz.; 10 P.M., 4 oz. — 12th: 12.15 P.M., 5 oz.; 2 A.M., 4 oz.; 5.15 A.M. 6 oz.; 7.50 A.M., 10 oz.; 10.45 A.M., 6 oz.; 1.21 P.M., 5 oz. Making a total of 48 oz. The urine voided continued to be blood-stained until May 14th. On the 15th it was neither blood-stained nor did it contain albumen. Its specific gravity was 1023, and there were 40 oz. voided in twenty-four hours. On the 16th the quantity of urea was estimated, and found to be 495 gr. in 42 oz. passed in twenty-four hours. On May 17th the wound was in great part united, and the stitches were removed. The patient had had no pain since the operation, and his only discomfort had been the enforced detention in the recumbent position. On May 20th the bowels had not acted since the operation, and so an enema was given. This had the desired effect, and the defecation was unattended by pain; but on May 21st, from the state of the dressing, it was inferred that a little urine had again been discharged through the torn wound. The temperature rose on this day to over 101°, 101·8° being the highest. On the following day, the 18th, and on part of the 19th, the temperature remained just below 100°. With these exceptions the temperature throughout never exceeded 99° F. Sixty ounces of urine were passed per urethram, so that the chief part, if not the whole, of the urine from the left, as well as the right, kidney, must have come the proper way. On the 23rd the bowels again acted twice, and again a small quantity of urine was thought to have come subsequently through the wound, but the amount so escaping was extremely small.

It would seem as if the passage of the fæces along the descending colon caused some disturbance to the wound in the kidney, which, however, must have nearly healed. This interference was the less improbable owing to the situation of the wound in the kidney. Forty-six ounces of urine were passed the natural way; it was of good colour, sp. gr. 1027, acid, and contained no albumen. On May 28th the patient, who had been on ordinary diet since the 26th, was feeling quite well, and only the track of the drainage-tube remained unhealed. On June 3rd this track had closed, so that not even a fine tube could be introduced. On June 10th he got up for the first time. On June 12th he went into the garden and there took walking exercise. He continued to gain strength daily, and was considered to be well, when on June 26th, at 8 P.M., after taking a good deal of exercise outdoors, he passed urine coloured deeply with blood. At 4.30 A.M. on June 27th the urine was still more blood-stained than that passed at eight the previous evening. At 9 A.M., June 27th, the urine was much less mixed with blood, and on June 28th 51 oz. of urine were passed in twenty-four hours: it was acid and of sp. gr. 1020, and contained neither blood nor albumen. The bowels had been acting twice a day, so that the hæmorrhage could not have been due to pressure on the kidney by an overloaded colon. No pain, sense of discomfort, or feeling of illness of any sort, attended this attack of hæmaturia. For a few days he was kept in bed, but there was no return of the hæmaturia, and on July 8th he left the hospital quite well and with the cicatrix in his loin throughout perfectly firm. On several occasions since (the last being Jan., 1885) he has been seen at the hospital. He has had no return of the hæmaturia, never suffers pain, has been at work regularly since leaving the hospital, and has never felt better in his life than now. The calculus consisted of a nucleus of oxalate of lime coated first with urate of ammonia, and outside this with oxalate of lime again.—MR. BARWELL thought that it would have been better if the kidney had been removed at the time of the operation in Dr. Symonds's case, for the kidney was evidently considerably diseased. He did not think that the danger would have been increased by nephrectomy. He did not think that the other kidney should be inspected, at any rate until an estimate of the amount of urea discharged had been estimated.—DR. CHARTERS SYMONDS said that though the kidney was practically useless, nevertheless it was merely atrophied from pressure; and, as no active disease was present, he decided to leave it.

Mr. Morrant Baker showed a living specimen of Floating Kidney in a Man.

MEDICAL SOCIETY OF LONDON.

Annual General Meeting.—Diet in the Febrile State.

THE annual general meeting of this Society was held on Monday last, Mr. Arthur E. Durham, F.R.C.S., President, in the chair.

Mr. A. P. GOULD read the report of the Council, which congratulated the meeting upon the prosperity which has marked the one hundred and twelfth year of the Society's existence. The Proceedings of the Society would continue to be published annually. Only one essay had been received in competition for the Fothergillian medal, and the adjudicators had not yet completed their report. The financial position of the Society had been materially improved.

The report of the hon. librarian, Dr. ALLCHIN, stated that upwards of 2500 volumes on the subjects of Anatomy, Physiology, Medicine, Surgery, and Midwifery had been repaired and catalogued and placed in their respective sections for easy reference.

The adoption of the reports was moved by Dr. SEWELL, seconded by Mr. DAVY, and carried.

Sir JOSEPH FAYRER moved a vote of thanks to the retiring President, which was seconded by Mr. GOODSALL, and duly acknowledged by Mr. DURHAM.

A vote of thanks to Dr. Wiltshire on retiring from the position of honorary treasurer, the duties of which he had discharged during a very anxious period, was proposed by Dr. THEODORE WILLIAMS, and seconded by Dr. WALTER SMITH. After a vote of thanks to the retiring vice-presidents and members of Council had been carried, a similar vote to the retiring honorary secretary, Mr. Pearce Gould, was put and carried by acclamation.

Dr. ALLCHIN read a paper on Diet in the Febrile State, which appears in full on another page.—Dr. ROUTH advocated the use of inunction to check cutaneous respiration and so diminish the pyrexia. As to diet, he strongly recommended raw beef-juice, made with tepid water, which was very easily absorbed; he estimated that three claret wineglasses were equivalent to a mutton chop. He agreed with Dr. Allchin in recommending fats, especially cod-liver oil, in fever to supply the waste of hydrocarbon.—Dr. DE HAVILLAND HALL regretted the absence of practical observations drawn from Dr. Allchin's experience. Dr. Dupré had provided an excellent practical recipe for the beef-tea or beef-juice recommended by Liebig. Take one pound of meat and one pint of distilled water, from two to four minims of hydrochloric acid, and from fifty to ninety grains of common salt. The meat must be finely minced and soaked in water for one hour; the fluid was then to be strained through a fine sieve without pressure, and the filtrate made up to one pint. The whole of the albumen was thus extracted.—Dr. T. H. GREEN thought Dr. Allchin's paper gave an excellent *résumé* of the physiology of diet.—Dr. PARAMORE made some remarks on the value of various articles of diet which might be used either as food for children or in fever.—Dr. ALLCHIN, in reply, said that he had specially advocated the use of partially-digested amyloid foods.

Reviews and Notices of Books.

A Practical Treatise on Urinary and Renal Diseases. By W. ROBERTS, M.D., F.R.S., Professor of Medicine at the Victoria University, and Consulting Physician to the Manchester Royal Infirmary; assisted by R. MAGUIRE, M.D. Lond. Fourth Edition. London: Smith, Elder, and Co. 1885.

TWENTY years have nearly elapsed since the first edition of Dr. Roberts' work on Renal and Urinary Diseases was brought under the notice of the profession, and during that period it has undoubtedly held a foremost position among works on the same subject, both as a text-book for the student and as a practical work of reference for the practitioner. The cause of its great success lay both in its comprehensiveness and conciseness. Other works, indeed, were before the profession, but they either dealt with part only of the subject or else were too diffuse for practical purposes. Another attractive feature of Dr. Roberts' treatise was its eminently clinical character and the graphic manner in which the essential features of the disease under consideration were portrayed. The third edition of the work has now been exhausted for some years, and hitherto Dr. Roberts, for want of leisure, has been unable to undertake the preparation of a fourth; but, having obtained the assistance of Dr. Maguire, he has at length been able to accomplish it. The task must have been no slight one, for during the few years that have elapsed since the appearance of the last edition our knowledge with regard to renal and urinary pathology and physiology has extended so enormously that nearly the whole of the subject matter of the work required to be either revised or entirely rewritten. In many points the authors have succeeded in this difficult task, but at the same time we must confess to some disappointment that the work does not always keep itself quite in touch with existing views. This, no doubt, is occasioned by a natural desire to keep to the old lines as much as possible whilst importing new material; but this has resulted in places in a want of harmony between the new and the old.

The opening chapters, describing the Physical Properties and Chemical Constituents of the Urine, together with the methods of examining that fluid, are excellently arranged, and are full of information. In the section describing the colouring matter of the urine we find the interesting observations of Dr. Maguire, on the occurrence of certain urines which become brown on exposure, owing to the presence of pyrocatechin, which he believes to be identical with Bödecker's alkapton. Speaking of the presence of bile acids in the urine, he mentions only Harley's view that they are charac-

teristic of jaundice from obstruction, and does not mention the fact that they are constantly present in small quantities in normal urine, nor the view, now generally accepted, that bile acids are found only in the earlier stages of all forms of jaundice, and that they disappear as the destruction of the liver tissue proceeds. With respect to the physiological variations in the reaction of urine, Dr. Roberts still considers that the "alkaline tide" is caused by the preponderance of alkaline bases taken in as food. Though this may possibly explain its occurrence after a meal, it altogether fails to account for it when no food is taken, such as after cold bathing, &c. Dr. Roberts does not believe "that there is any constitutional state specially characterised by an excessive elimination of phosphates." Although undoubtedly in a considerable number of cases the so-called "phosphatic diathesis" is nothing more than a deposit of earthy phosphates, without any excessive elimination, still there are many well-authenticated cases on record which show that the total amount of phosphoric acid excreted daily may be increased considerably, out of proportion to the other urinary constituents, and which can only be accounted for on the supposition that there is increased metabolism of the phosphorus-yielding tissues. No mention is made of the occurrence of partially oxidised phosphorus in urine, in the form of glycerin-phosphoric acid, protagon, or lecithin; it has, however, been found in the urines of patients suffering from various nervous disorders, diabetes mellitus, and phthisis.

In the chapter on Micro-organisms in the Urine, Dr. Roberts, in addition to the usual forms, describes an organism he met with in the form of beaded threads, or micrococcic chains, in freshly passed undecomposed urine. He has never met with a similar case, and, on account of its rarity, believes the parasite to be of exotic origin. As the patient had resided some years previously in South America, this opinion is likely to be correct.

The chapter on Diabetes, both insipid and saccharine, is characterised by the author's usual clinical insight. We must demur, however, to the statement that the classification of the former into a disorder characterised by a profuse discharge of water without an increase in the amount of solids, and into another characterised by only a moderate discharge of water but an excessive elimination of solids, is "valueless in practice" or difficult to determine. Surely there must be a vast distinction between the mere draining off of water unattended with any definite increase of solids, and those cases in which the solid matters are doubled and trebled. In the one instance the hydruria is caused by mere increase of pressure in the capillaries of the kidneys under vaso-motor influence; in the other the drain of solid matters is occasioned by increased metabolism throughout the body generally. Nor is the difficulty in the way of recognising the condition so stupendous as Dr. Roberts imagines; the collection of the twenty-four hours' urine once a week and the determination of the specific gravity of the collected urine being all that is required. With regard to diabetes mellitus, we must express a somewhat similar regret that the distinction between the more permanent forms of diabetes and those in which sugar appears as a more or less fleeting symptom is not more clearly defined. In this we think the suggestion originally made by Dr. Lauder Brunton extremely valuable—viz., to restrict the term diabetes to the more permanent forms, whether mild or severe, whilst the purely symptomatic forms should be simply referred to as glycosuria. Again, with regard to the unity or multiformity of Bright's disease, we fancy the statement that the belief in the multiformity of the disease has "steadily gained ground" in this country will be received with considerable reserve; certainly it is not borne out by reference to the recent contributions of younger pathologists. Dr. Roberts still includes the waxy kidney among the many forms of chronic Bright's disease, though he admits that many pathologists now distinguish between it and the changes resulting from diffuse inflammation.

The chapter devoted to Suppurative Inflammations is perhaps the least satisfactory in the work, and yet within the last few years it has been much discussed and made the subject of extensive research. Little allusion is made to perinephritis. The valuable investigations of Mr. Marcus Beck (published in 1879) into the pathological conditions that give rise to "surgical kidney," or, as he terms it, consecutive nephritis, are dismissed in a foot-note. This is hardly a fair recognition of what perhaps may be considered one of the best contributions to original pathological research, published during the last five years, and one which has done so much to throw light on this difficult question. Mr. Beck's work is now generally recognised. Mr. Doran, in his recent volume on Diseases of the Ovaries, &c., has pointed out how frequently the morbid conditions noticed by Mr. Beck are found in the kidney after death from operations on the internal genital organs. This observation, taken in conjunction with the fact communicated by Dr. Matthews Duncan, that albuminuria is frequently associated with parametritis (a communication which Dr. Roberts has overlooked), seems to show a probable connexion between the kidneys and the internal genital organs. This connexion, which Dr. Matthews Duncan considers to have reference to embryonic development, may probably be due to communication through the lymphatics, a supposition which the recent researches of Dr. Steven of Glasgow render extremely probable. Finally, we imagine surgeons will dissent from the opinion that the question of the removal of the kidney in unilateral pyonephrosis must still "be considered *sub judice*."

In bringing our remarks to a conclusion, we would observe that our criticism has been made in no adverse spirit. The present edition deserves all the praise that we have already bestowed on previous issues of the work, but we have felt that a systematic and representative treatise of this kind should adequately represent the views held by the working pathologists of the day. We do not say that their views should be adopted, but they are certainly deserving of more recognition and criticism than have been accorded them in the volume before us.

In War Time. By WEIR MITCHELL. Boston: Houghton, Mifflin, and Co. 1885.
Charley Kingston's Aunt. By "PEN OLIVER." London: Macmillan and Co. 1885.

IT cannot be doubted that success in our profession is not unfrequently due to the possession of powers of exposition above the ordinary. We have known men to owe their position, both in the profession and outside it, almost solely to their mastery of the English language. It would perhaps be going too far to say that success is impossible without the possession of the literary faculty, but it is certain that where this power is combined with fair intellectual abilities success is sure to come sooner or later. Dr. Weir Mitchell is known to the profession at large as a man of unusual mental capacity, endowed with the powers of original research and literary expression in a remarkable degree. As a work of shrewd observation and sound inference his first essay in prose is a thorough model. The true physician ought to have the gift of clear insight into the nature of men and things; he should be able to penetrate the thin coating of veneer which civilisation has developed as an exoskeleton about the hearts of men. Even where civilisation exists in its earliest dawn, as amongst savages living in tribes, the heart is invested with a thin covering which mostly takes the shape of artfulness, and is easy to dismantle. The most prominent character in Dr. Weir Mitchell's novel is that of

Dr. Wendell, for whom one can but have the heartiest contempt, notwithstanding that he manages to engage the serious affections of Mrs. Alice Westerley, a creation with which we are in love, and a few specimens of which we believe we are acquainted with in actual life. Dr. Wendell is presented as capable in a measure of high intellectual abilities, but utterly wanting in any of those traits which deservedly call forth our admiration and sympathy; he is a weak-backed, insignificant piece of human nature, which we would fain believe is not represented in the ranks of the medical profession of to-day; of courage he has none; of instability he is a perfect example; his powers of application are of the feeblest. Blest with extraordinary powers of taste for colour, form, and music, his is a gentle intellectuality, totally unfit to cope with the serious business of the medical profession. Indeed, as the author says, "it seems probable that he should never have been a doctor at all." The novel is decidedly interesting; its dramatic features are good; the plot is not very strong, but the interest in the story seldom flags; the conversation is for the most part natural, the sentiments are of the refined orthodox order, and the language, though occasionally savouring a little too much of poetic licence, is taken from the well of English undefiled. "Where the barren soil seemed to give back no least return" reads more like a line of verse than of prose.

The interest of "Charley Kingston's Aunt" is of a rather more exciting kind than that of the tale above noticed. We think "Charley Kingston's Aunt" will be widely read, not as a serious literary attempt, but as an attractive story of the lighter kind. There is nothing improbable in the plot, and the story is well narrated. Besides the incident—in the dissecting-room—on which the novel hangs, there is scarcely more than a little by-play in the form of a love-chase, the course of which runs fairly smoothly. The novel might be compared to a star company at a theatre or to one of Doré's pictures, where the central figure is everything, and where the setting simply serves as a foil to the principal character. In this respect it contrasts with Dr. Weir Mitchell's narrative, which abounds in skilful delineation of character.

ARMY ESTIMATES.

IN the army estimates which have just been published the sum required to defray the "expense of the medical establishment and services" is stated as £320,960. In the estimates for 1884-85 it was only £303,000, but a sum of £15,000 was provided in a supplementary estimate on account of the war in the Soudan, thus raising the total to £318,000. The increase for the coming year, therefore, is only £2900, but as there is shown a decrease of £9000 in the charge for militia surgeons and civilian medical practitioners, the increase would be more correctly stated at about £9000. A considerable portion of this increase, however, is due to the transfer to the medical vote of the officers of the Medical Staff Corps, formerly included under the vote for regimental pay. The estimates show an increase in the *personnel* of the medical staff of twenty-four executive officers and a decrease of four acting medical officers and of two apothecaries; the number of administrative officers remains unchanged. The strength of the department, exclusive of the officers employed in India, will be 1 director-general, 7 surgeons-general, 20 deputy surgeons-general, 551 brigade surgeons, surgeons-major and surgeons, 52 acting medical officers, and 1 apothecary. For the pay and allowances of these officers, and including surgeons on probation at Netley, the sum of £245,005 is required. A further sum of £4000 is taken for the pay of civilian medical practitioners and medical bills, of which £380 are for colonial stations and the rest for home districts. The Army Medical School at Netley requires £7268, but this includes an "allowance to the examiners of candidates for the medical service" of £700. For the Army Sanitary Committee £1150 are taken, being the same amount as in previous years. The strength of the Medical Staff Corps is stated at forty-nine officers and 2400 non-commissioned officers and men. The sum estimated for their pay and allowances is £87,955; in addition to this there is a charge of £25,500 for departmental and extra duty pay. For pay of nurses, extra duty pay of regimental hospital orderlies, and miscellaneous labour £8650 are required, but we cannot find any statement of the number of nurses included under this head. We are glad to observe that it is intended to continue the instruction of the men of the medical staff corps in hospital cookery, £550 being taken for the pay and allowances of civilian instructors. The estimate for medicines, &c., amounts to £25,000, being £2000 above that of the preceding year. The number of medical officers on half-pay eligible for employment is very small, amounting only to eight, of whom one is an administrative officer and seven are executive officers. On the retired list the numbers are 407, and the estimated amount required is £160,000. There are 258 widows of medical officers in receipt of pensions, and fourteen medical officers receive £100 per annum, each as reward for distinguished or meritorious services; in the list of the latter no change has occurred during the past year.

NAVY ESTIMATES.

THE sum which appears in the Navy Estimates under the head of medical establishments at home and abroad amounts to £67,650, being only £200 in excess of that for 1884-5; for medicines and medical stores £80,810 are required, being £2490 more than in the preceding year. As we have pointed out on previous occasions, these sums are very misleading, since the first does not include the pay of medical officers afloat, and the second comprises many things which are certainly miscalled medical. So far as we can ascertain from the Estimates, in their peculiar form, the *personnel* of the department to be provided for consists of 1 director-general, 2 inspectors-general, 10 deputy inspectors-general, 72 fleet surgeons, 75 staff surgeons, and 187 surgeons. A sum of £415 is allowed for the expenses connected with the examination of candidates, and allowances of £150 to one of the fleet surgeons and £50 to one of the surgeons at Haslar Hospital are granted "for duties in connexion with the medical course of instruction,"—the miserable substitute for the course of which the young officers formerly had the advantage at Netley. An allowance of £50 is also given to one of the surgeons for "instructing boys training for Sick Berth Staff." In connexion with this we are much pleased to see that the promised introduction of female nursing into the naval hospitals has taken place. At Haslar Hospital one head sister and eight sisters, and at Plymouth Hospital one head sister and five sisters, are now placed on the establishment, and a sum of £410 is put down for providing accommodation for the female nursing staff at Haslar. On the half-pay list there are 33 officers who are liable to be called upon to serve. The retired list has 21 inspectors-general, 70 deputy inspectors-general, 66 fleet surgeons, 71 staff surgeons, and 40 surgeons, and there are 243 widows of medical officers in receipt of pensions. We are glad to observe that sanitary works have not been quite overlooked, for under that head the following charges appear fairly to come:—At Chatham Dockyard £500 for boring for water-supply, at Pembroke Dock £1800 for fresh water reservoir, at Bermuda £1100 for sanitary improvements, at Haslar £2500 for hospital kitchen, at Forton Barracks £1200 for a new swimming bath, and at Walmer £250 for new latrines in drill field.

THE TOKIO MEDICAL LIBRARY AND MUSEUM.—In order to hasten the coming of the time when Japan may begin, in a measure, to repay the debt she owes to the Western World for the wealth of learning made available to her, it has been decided to establish a library in Tokio, in which may be found the principal foreign and native publications relating to medicine. The library has been established under the auspices of the "Sei-I-Kwai," or Society for the Advancement of Medical Science in Japan, to encourage the more extensive reading of Western medical works, and to endeavour to raise the standard of medical literature by furnishing sources of reference now only available to very few.

THE LANCET.

LONDON: SATURDAY, MARCH 7, 1885.

WHILST almost every department of medical science has of late years been subjected to searching investigation and reform, Forensic Medicine has been sadly neglected. This is deeply to be regretted, since the application of medical knowledge to the administration of justice is one of the highest functions of the profession. Instead, however, of the medical witness being credited as the possessor of an enviable position, he is too often regarded as an object of suspicion. The cause of this is not far to seek. In civil trials especially it is customary for the litigants on each side to be supported by doctors of their own selection, and, as everyone knows, the latter are frequently so imperfectly informed of the facts that they only become conversant with the merits of the case when under the lash of the cross-examiner, and when it is too late to withdraw unconditionally from a position, however untenable, without loss of prestige. The fault lies rather with the system than with its supporters and exponents. Many a medical man has entered the witness-box with the strongest determination to "speak by the card," and consistently with the terms of the oath he has taken, but has left it disgusted with himself and discredited by others. He is led into deep water by the contentions of opposing counsel, and bewildered by the "legal jargon" let fall as a cloud before him. The natural remedy for this blot on our judicial procedure lies in the appointment of medical assessors to assist the presiding judge in adjusting the balance between contending suitors. If such a practice were instituted it would inevitably diminish the number of vexatious actions—actions brought on the chance of a verdict being obtained through the misunderstanding or sympathies of a jury. The medical witnesses would rest secure in the support of a competent and disinterested arbitrator, and there would be less temptation to "rising young witnesses" to seek the favour of wealthy but unscrupulous clients. Moreover, legal medicine in its administrative aspect would be freed from the stigma that rests upon it, and physicians and surgeons would not feel, on taking part in a "trial for damages," that they were placing their reputation in jeopardy. The difficulty as regards the payment of an assessor in civil actions might be got over by an enactment that his fee should be included in the "costs" in the case, and, like the other charges, be subject to taxation. What has been said in reference to the procedure in the equity and common law courts applies with double force to criminal trials, in which something more than the professional morality of the medical jurist is concerned. Here the liberty of the subject is at stake and public opinion widely exercised. Surely, if it is not derogatory to the status of the judge in the Admiralty Court to be assisted by Trinity brethren, there can be no objection to an assessor at a tribunal where questions based upon the most inexact of sciences, and one that requires special and extensive knowledge to interpret, are raised. Our continental neighbours are ahead of us in this matter; but then legal reform in this country is painfully slow and half-hearted.

But of greater interest to the practitioner of medicine than his relations to the High Court of Justice is the position he holds with respect to coroners' inquests—of greater interest because, whilst he may be called upon only once, perhaps, in his professional career to give evidence in one of the superior courts, he is practically certain to take part in many an inquiry as to "when, where, and by what means" a certain individual came by his death. A great deal has been written, and many suggestions have been made, upon the desirability of experts being appointed and attached to the office of coroner in order that that official may have the assistance and guidance obtainable only from those specially learned in pathological science and medico-legal practice. There is something to be said in favour of the proposal, yet nevertheless it is a question beset with dangers, against which it would be absolutely necessary to provide efficient safeguards. In the majority of cases the general practitioner is perfectly competent to conduct a post-mortem examination, and to bring the requisite knowledge to the interpretation of his observations. The privileges conferred upon him by his diploma and the Coroners Act are not to be assailed with impunity; and although we freely admit that in cases of unusual complexity, especially where the fate of a fellow-creature is involved, it would be wise to have a second opinion in order that one might serve as a check upon the other, and the responsibility be divided, we hold that any attempt to supplant the ordinary medical witness by an expert would be dangerous in principle and ruinous in practice. It is quite true that forensic medicine as an experimental art is all but ignored in our schools, as shown by the superficiality of the acquirements of candidates presenting themselves before the examining boards. At the same time it is equally clear that a student learns most of what is useful to him in professional life, not from attending lectures on theoretical or constructive cases, but by actual experience of the difficulties inseparable from an investigation which embraces not only medicine proper, but many cognate sciences. We do not hesitate to say that jurisprudence, instead of being practically taught at our colleges, is treated as though it were an ornamental appanage to medical education. It may be argued that classes in toxicology are conducted with a view to furnishing the student with knowledge that will serve him in good stead when he enters on the active exercise of his profession. So far it is a praiseworthy undertaking, but when we consider how comparatively small a part toxicology plays in the inquiries before a coroner's jury, and that for this particular branch of forensic medicine special provision has been made by the appointment of Government analysts, it is obvious that our present code of instruction only touches the fringe of a subject included in the prescribed curriculum of study. We would suggest that, whenever possible, medico-legal investigations, including an examination of the body, should be held at our hospital schools; and further, that ordinary post-mortem examinations should be conducted as though they were the bases of official inquiry, and not made merely for the purpose of illustrating some point in transcendental pathology.

To return to the question of the advisability of appointing

medical experts as assessors to coroners' courts, we repeat that there can be no objection to such a course, provided that the rights of the general practitioner are not curtailed. The system should be permissive, not compulsory. If a medical man, for instance, is requested to make a post-mortem examination of a body dead of some infectious disease, and at the same time he is likely to be summoned to a case of midwifery, then it is obvious that it would be to the advantage of all parties that he should have the assistance of a colleague upon whose attendance he could rely. Again, it might happen that in a particular instance he might not feel justified in formulating his opinion for presentment before the coroner's court without confirmation by one specially versed in the subject. It would save time—an important element in medico-legal inquiries—if, instead of referring the matter to the coroner he were empowered to consult at once an authority appointed for the purpose. It should be a matter of mutual understanding that the coroner should not in the first instance commission the expert to assist in making the inquiry except in cases of urgency or difficulty. It would be reasonable for the general practitioner to give one half the fee to the expert whenever he requested his services, and for the coroner to be responsible for the remuneration of the expert, without making any deduction from the fee of the general practitioner whenever he ordered the former to serve as an additional witness.

THOSE excellent people who are made unhappy by hearing—as we hear far too often—from the pulpit of the hostility of science to religion should really be a little less fearful. Their fears do not seem to be shared by the best members of every section of the Church. Only the other day we reported a very valuable contribution to science by Dr. DALLINGER, a Wesleyan minister, in the shape of the discovery of a new septic organism, with a description of its habits and history, which would have done honour to PASTEUR, or KOCH, or CHEYNE. The whole press has recently been eloquent in praise of the Bampton Lectures of the new Bishop of London, and we desire to-day to take our share in the recognition of this great service, as one of deep interest to that large section of scientific men who are not vain enough to doubt that there are many facts, and possibly some forces, in the universe not yet included in their philosophy, and that there exists behind all these facts and forces a great essential Being whose Will preceded and continues to dominate all physical laws, and whose deity is only confirmed by His own eternal recognition of moral law. It would indeed be a pitiable thing for the human race, even in its most gifted members—its NEWTONS, and HARVEYS, and DARWINS,—if it were to lose the conviction, hitherto so strong in the greatest minds—that there is such a Being, compared with whom our wisdom shows as foolishness and our keenest glances into the mysteries of life and nature are but as blind gropings. It is only fair to many even of the most sceptical scientists to admit that they display no jaunty irreverence, no deep satisfaction with their cold scientific conclusions, and that they are quite ready to believe that intelligence and conscience have not reached their consummation within the bounds of their nature.

The Bampton Lectures of Dr. TEMPLE[1] illustrate, in our opinion, the attitude which Christian men should assume towards science and those who promote it. He is no friend to religion who thinks to promote it by denouncing and discouraging science. Science "falsely so called" is contemptible. But every ascertained fact about matter, animate or inanimate, from the smallest particle up to the largest sun, is a real gain that should excite the gratitude of all men, and that must ultimately increase our advantage, as well as our admiration for Him who preceded all and dominates all.

Dr. TEMPLE is by no means the first eminent Christian who sees no enemy in science, and who can regard its most far-reaching discoveries with equanimity. But he is entitled to the credit of having, in the Bampton Lectures of 1884, taken in hand with equal boldness and candour, and we may add piety, a consideration of the relations of religion and science as affected by the latest suggestions of the latter, especially that of Evolution. It would perhaps be premature to say that the theory of evolution is established in the sense that gravitation or the main conclusions of geology are established. There are yet gaps in the evidence, missing links in the chain; but Dr. TEMPLE is quite right in perceiving the steady set of scientific opinion in the direction of the theory of evolution, and with a wise sense of past errors on the part of religious men, who are always apt to be unnecessarily anxious about the "ark of GOD," he cautions them against repeating the error of those who in the first burst of light of the astronomical and geological sciences saw dangers to revelation. We commend the stately and well-sustained argument of the Bishop to the attention of all devout men, whether they ostensibly range themselves on the scientific side or on the religious. We are more than ever disposed to abolish this distinction, readily admitting that, as there is now more than ever on the part of religious teachers a disposition to look at religious dogmas in the full light of science, so there is in scientific men of the first eminence a devoutness and a reverence contrasting most happily with the flippancy of unbelievers in other times. We could have no finer illustration or justification of this remark than the language and spirit of Mr. KITCHEN PARKER in his recent admirable lectures as Hunterian Professor at the College of Surgeons, especially when alluding in terms of high praise to the Bampton Lectures of which we are now writing. Dr. TEMPLE maintains that the doctrine of evolution as held by the most authoritative biologists in no way invalidates the doctrine of Creation, or even that of Design as elaborated by PALEY; but, on the contrary, that it greatly magnifies both. There is nothing in the present discoveries of science to explain the beginning of Life or the beginning of that spiritual faculty in man, in virtue of which he distinguishes all over the world, with more or less clearness, between right and wrong. The doctrine of evolution throws back to a more remote past the creative acts, and reduces the frequency of the necessity for the intervention or the interference of the Creative Will; but it in no way contrives to do without this factor, and apart from the assumption of it has no account to give of the origin of life even in its humblest forms—to say nothing of that highest manifesta-

[1] Macmillan and Co., London.

tion of life, the faculty of Conscience. DR. TEMPLE readily admits that much of recent science tells heavily upon many of the dogmas and formulæ in which men have tried to crystallise religious truth; but the dogmas of men are as different from the truth of GOD as a crystal is different from an organised cell. It is no part of Dr. TEMPLE's task to maintain every article of faith which exacting men would impose on their fellow-men. He allows that different parts of the Bible appeal to us with varying degrees of power and effect, and that even different alleged *miracles* have very different degrees of authentication. The one "miracle" for which he sees clear, unmistakable, and sufficient evidence is the Resurrection. But while he thinks other miracles less effectually attested, he fully admits that the miraculous element in the New Testament cannot be excluded "without a complete surrender of the position taken by the first Christian teachers." Here we must leave these admirable lectures, not without a further expression of our obligation to Dr. TEMPLE for a worthy and well-sustained argument, that may well help religious and scientific men to regard each other with more mutual respect, and to try to see from each other's point of view.

THE prominence we have given to the subject of school hygiene for many years past has been slowly bearing fruit, and is now attracting sufficient public attention to bring forth leading articles in the lay press. The reports of "THE LANCET Sanitary Commission on Public Schools," issued several years ago, indicated the importance we attached to this subject. At that time we found ourselves beset by one great difficulty, as we do now; and that difficulty is the secrecy maintained by all the public schools in the country on the subject of health and sickness among the pupils. We ask, Is it expedient that this secrecy should be longer observed? Have not the parents of English schoolboys a right to such information as will enable them to judge of the relative merits of the different schools with respect to the general health of the boys? That our public schools differ much in this respect is well known. At one typhoid fever recurs term after term, at another diphtheria, at a third scarlatina, and at a fourth "blood-poisoning." The only information parents can obtain is for the most part such as may be written home by the boys, or which is communicated by tutors interested in the good repute of the school. There is indeed no sufficient information available upon which the English parent can form a judgment of the suitability of any particular school to the health requirements of his boy's constitution. The school has therefore to be selected at haphazard.

This state of things is eminently unsatisfactory to parents, and is oftentimes attended with permanent injury to the health of pupils, and in some cases with fatal results. Many of our public schools are in low-lying, damp localities. To send a boy with an inherited disposition to struma or its allied diseases to such institutions will weaken his constitutional powers and lessen the value of his life, and in some instances bring it to a premature end. The upper classes of this country are exceptionally prone to such diseases, and many families "die out" and become extinct from these inherited dispositions, which judicious tending during the period of growth and development would help to subdue or counteract. Sufficient thought is not given by the well-to-do classes of this country to the bearing of school life on the health of manhood; yet it is a subject which must grow more and more in importance with each generation. A parent in selecting a school for his child should not lose sight of the inherited tendency to certain maladies in his family, and schools which favour the development of such tendencies should be eschewed. Yet the information upon which a parent can judge in this case is very insufficient.

The masters of public schools make widely known their educational successes—the number of scholarships gained and the competitive examinations passed. These have a far more intimate relation to the health and physical vigour of the boys than parents and schoolmasters are disposed to believe. Health and success in a scholastic career are essentially correlative. If the locality of a school is such that lassitude and debility prevail among the boys as a result thereof, no amount of ardour in the masters can raise the scholarship of the school up to a fair average. There will be a deficiency not in honours alone, but in success at the ordinary competitive examinations for entrance into the army, navy, or other professions. A certain standard of health must be maintained, and this can only be accomplished under medical supervision and direction, with freedom of judgment and liberty of action. Between masters and doctors there always has been a clashing of authority, and while the position of one is dependent on the will of the other there can be no freedom of thought and action. Nothing short of the appointment of medical inspectors to all grades of schools, independent of all authority except that of the Local Government Board, and responsible to and acting with the authority of this department, can put this matter on a proper footing.

Annotations.

"Ne quid nimis."

THE ROYAL COLLEGE OF SURGEONS.

ON the 4th inst., on the invitation of the President of the College, a deputation of the Association of Fellows waited upon the Committee of Charters and Bye-laws to consider certain recommendations proposed by the Association to be included in the new Charter. The deputation consisted of Messrs. Pollock, Willett, Norton, Davy, Macnamara, Jessett, W. Barnes, Couper, Tweedy, and Morgan (sec.); and the members of the Committee by whom they were received were Sir J. Paget, Sir S. Wells, and Messrs. T. Smith, Marshall, Cadge, Holmes, Erichsen, Lund, Savory, and Cooper Forster. The conference lasted over two hours. Until the Committee has reported the result to the Council no decision can be arrived at. Whatever that decision may be, nothing but benefit to the College can ultimately accrue from a free and friendly interchange of views between the Council and the more active Fellows. Both parties may be credited with a sincere desire to promote the welfare of the College and enhance its dignity and importance. The problem is the reconciliation of two lines of policy.

THE PHYSIOLOGICAL ACTION OF COCAINE.

DR. HERMANN M. BIGGS of New York has recently published the results of an exhaustive inquiry into the physiological action of cocaine on the frog, his observations having reference more especially to the influence of the drug on the various organs and tissues of the body. The experiments, which were conducted under the direction of Professor Christiani in the physiological laboratory of Professor du Bois-Reymond at Berlin, are of considerable interest. The salt employed was the uncrystallisable hydrochlorate prepared by Merck of Darmstadt. The solutions were all made with water, and varied in strength from 1 to 4 per cent. In the first place it was noticed that in frogs where the 2 per cent. solution was applied to the skin of the leg or to the mucous membrane of the mouth, complete anæsthesia of the part was quickly produced. The action on the pupil was not constant, but usually a moderate degree of mydriasis resulted. When a small toxic dose, say, a fifteenth of a grain, is injected under the skin, there is at first no perceptible effect, with the exception, perhaps, of a short period of excitement, which is never very marked and is often absent. The frog soon becomes quiet, moves languidly when touched, and breathes with increased frequency. In a few minutes it becomes motionless, or moves only after considerable effort. There is loss of power in the extremities, and this appears earlier and is more marked in the hind limbs than in the front. In a short time these effects pass off, and in an hour or two the animal seems as well as ever. After the injection of what may be called a moderate dose, say, a sixth of a grain, more decided symptoms are produced, and at the end of seven or eight minutes the animal lies prone and makes no effort to move, even when stimulated freely. In from two to three hours there are signs of recovery, and in about five hours irritation produces characteristic clonic contractions. When large toxic doses are given to a frog—a third of a grain and upwards—the effects manifest themselves almost instantly. All the usual phenomena follow in rapid succession, and in a very marked form. In two or three minutes respiration is laboured, there is decided opisthotonos, the pupils are dilated, the heart's action is slow, and the reflexes are abolished, or at all events greatly diminished. The animal has an anxious expression, and in a few minutes lies motionless on the table. After some hours signs of returning life begin to show themselves, but it is many days before recovery is complete. After the exhibition of a lethal dose the heart continues to beat for twenty-four or thirty-six hours, and then stops in diastole. The action of cocaine on the heart and on respiration is well marked. In small doses it at first increases the number of respirations and then decreases them, but in larger quantities death ensues from paralysis of respiration. It has a depressant action, too, on the heart, reducing the force and frequency of its pulsations, and finally arresting it—both auricles and ventricle—in diastole. The action on the nervous system is still more marked. Small doses increase the reflex irritability of the cord for a short time, but when larger doses are given the period of heightened reflexes is lessened, and is followed by a period of longer duration, in which they are decidedly diminished. It appears from the researches of B. von Aurep that small doses heighten the irritability of the sensory fibres, but exert no effect on the motor filaments. Large doses almost completely paralyse the sensory filaments, and diminish greatly the irritability of the motor. It is found that cocaine in one per cent. solution when applied directly to the nerve-trunks will, after a transient period of increased irritability, depress greatly, and finally paralyse the nerve. If a nerve muscle preparation be made from a frog after poisoning by cocaine, the irritability of the nerve is found to be much diminished, and the strength of current required to produce a muscular contraction is decidedly greater than in the case of the normal frog. Small doses given hypodermically have little effect on the excitability of the voluntary muscles, but large doses diminish their contractility very decidedly. The pulsations are shorter, slower, and more feeble, and muscular excitability is soon exhausted. Dr. Biggs thinks that from the local and constitutional effect of cocaine on the different organs and tissues it is highly probable that its general action is a purely local one, exercised on those parts for which it has a chemical affinity through the medium of the blood. He concludes as the result of his experiments that the use of cocaine is indicated both in tetanus and in strychnia poisoning.

EXPENDITURE AT HOMERTON HOSPITAL.

TROUBLE has for some time past been brewing as to the expenditure at Homerton Hospital, and a subcommittee appointed to investigate the matter has now reported on it. This committee finds that, on a sudden increase of stimulants being ordered for a certain ward, the wine in question was not consumed by the patients, that the officers' dietary has been profuse and exceptional, that from the committee downwards there has been a lack of adequate supervision and an apparent indifference to responsibility, and that although actual collusion has not been shown to have existed between officials, contractors, and others, yet the condition of affairs was favourable to such collusion. The report then went on to refer to Dr. Collie, and a hope was expressed that he would in the future prove himself as efficient an administrator as he has been a physician. A resolution was also passed requesting the Local Government Board to make further inquiry, and on this a rider was proposed by Mr. A. Pell, M.P., and carried, to the effect that the investigation had shown the unfitness of the present medical superintendent for the office he holds. With the facts before us we think this rider should not have been proposed. It was admitted that the inquiry, not having been on oath, needed to be supplemented by an official one, that Dr. Collie had in every instance contended he was justified in acting as he did as regards stimulants issued to patients, and that for fourteen years past he had rendered able services to the Board. We can fully endorse the opinion as to the respect in which Dr. Collie has been held as physician and medical administrator, and we hope that official inquiry may lead to the withdrawal of all that is implied in the rider. The question generally is, from an administrative point of view, very serious. The stimulants at Homerton are stated to have cost between £4000 and £5000 in six months, and during the course of the inquiry the chairman of the Hospital Committee, the clerk to the committee, and the steward of the hospital, resigned their respective positions.

PULMONARY DISEASES IN WILD ANIMALS.

THE progress which has been made during the past three or four years in comparative pathology is certainly of the most remarkable kind, and has been owing in a great degree to the activity and ability of Mr. J. B. Sutton. We have had occasion during former sessions of the Pathological Society to comment upon the work of this observer. At the last meeting of this Society Mr. Sutton contributed an elaborate paper which gave an account of the zoological distribution of certain forms of lung disease among wild animals. We have elsewhere given a full abstract of this important communication. The main conclusions which have been arrived at are two in number. First, it seems to have been completely proved that tuberculosis is by no means a common disease of wild animals dying in captivity.

Secondly, it would appear that lung disease, not of a tubercular kind, is very frequent amongst the group of animals under consideration. Primates, when they are brought to this country, excluding man, appear to suffer from bronchitis, atelectasis, and lobular pneumonia. Carnivora under similar conditions are exceedingly liable to double pleurisy, lobar pneumonia, and bronchitis; whilst ruminantia suffer from "Perlsucht" or "bovine tuberculosis," bronchitis, and "worm-bronchitis." Mr. Sutton believes, probably correctly, that the vicissitudes of the English climate as contrasted with the tropical climate, from which many of these animals come, are to be set down as the causes of these bronchial and pulmonary affections.

THE OUTBREAK OF SMALL-POX AT THE THREE COUNTIES ASYLUM.

THE report of Mr. Swain, medical superintendent of the above institution, to the Committee of Magistrates, on the recent severe outbreak of small-pox, affords interesting evidence with regard to vaccination. Fifty-six persons in all were attacked. Twenty-two had three or more vaccination marks: of these, twenty recovered and two died. Of twenty-four cases having less than three marks, nineteen recovered and five died. Of seven cases having no vaccination marks, one recovered and six died. Of three cases described as "not known," two recovered and one died. Another table (of which there are seven appended to the report) shows the "percentage of recoveries and deaths on the various conditions of vaccination." Of the cases having three or more marks, 90·9 per cent. recovered and 9·09 died; of those with less than three marks, 79·16 recovered and 20·83 died; while of those who had no marks only 14·28 per cent. recovered and 85·71 died. The outbreak, of which we gave an account in our issue of Jan. 17th, appears now to be at an end. To vaccination and immediate isolation of the cases the medical superintendent attributes in great measure the checking of so severe and general an outbreak.

NO MEDICAL EVIDENCE.

AN inquest was held at Clayton-le-Moors on Feb. 19th on the body of a woman aged forty-five years. It transpired that the deceased, who had been addicted to habits of intemperance, was picked up in the streets partially insensible, and conveyed home by a constable. The husband of the woman was in bed at the time, but refused to come downstairs to assist his wife, on the ground that he had done it too often. Some hours afterwards he discovered her in a helpless condition, and, calling in a neighbour to assist him, placed her on a sofa and went to bed again. In the morning she was dead, and signs of profuse hæmorrhage were seen on the floor of the lower room, but none on the stairs or in the bedroom. The police constable deposed that he found the skull broken at the back part. No medical evidence was taken, and the jury returned a verdict "that deceased had fallen backwards downstairs whilst in a drunken state, and received injuries that caused her death," and severely censured the husband for not attending to his wife. Now, although it seems probable that the woman was in a helpless state from intoxication, it is not absolutely certain that she was not suffering from apoplexy. There are too many cases on record in which the diagnoses of policemen have proved to be erroneous. Partial or complete insensibility is apt to be interpreted by the terms "drunk and incapable," and for this reason alone we contend that it was very desirable that a medical man should have been called at the inquest. If the deceased did not fall downstairs, the most probable alternative, as suggested by the coroner, was that she had been pushed down. On the latter hypothesis suspicion would naturally rest upon the husband. As regards this point we offer no opinion; but we contend that if ever there was a case in which it was desirable to have skilled advice it was here. Coroners are too apt to rely upon the evidence of policemen, who, however well intentioned, are scarcely the proper witnesses to testify to the nature of an attack of coma, or of a fracture of the skull. In the interests of all parties concerned it is much more satisfactory to have these attested by medical men. That the husband was to blame there can be no doubt. It was his duty to see that his wife was placed beyond the reach of a fatal accident; but in extenuation of his conduct it is just to add that long suffering had blunted his humanity and warped his sympathy. He stands acquitted of any graver offence by the verdict of the jury. At the same time, it would have been better had the evidence, strong as it was, been further strengthened by such testimony as would satisfy public feeling generally. We trust that the mode of procedure in the above case will not serve as a precedent in future inquiries.

DEATH FROM ELECTRICITY.

IN the course of a correspondence in the *Electrician* on personal safety and electric currents, Mr. Trotter, observing that the case of the unfortunate man who lost his life at the Health Exhibition by touching the dynamo was not taken down in shorthand by a reporter, but that the coroner made very full notes, mentions that there was "first a spasmodic contraction of the arms and chest—in fact, of the muscles in the path of the current, described by a gesture by the witness which corresponded exactly to that which is tolerably familiar to those who occasionally receive an accidental shock. The man fell away from the dynamo, collapsed, rolled over, and became unconscious. He was probably dead before he fell. A slight mucous foam appeared at the lips; the body speedily became discoloured. Rigor never set in; and this, coupled with the fact that the blood never coagulated, is in accordance with several authentic records. All the bloodvessels in the path of the current were highly congested, more so in the chest than in the back; the brain was normal, and the heart empty."

THE PEKING HOSPITAL.

THE hospital at Peking, which is under the medical supervision of Dr. John Dudgeon, appears to have been of much service to the Chinese of that city and its surroundings. As seems to be customary with hospitals generally, the funds are in a bad state, but this lack does not seem to have affected the good work done. From the report which has recently reached us, we find that the annual attendances at the hospital are about 20,000, of which number about 8000 are new patients. There has never been a large in-patient practice. Cases of suicide by opium poisoning are of very frequent occurrence. Law and custom make it almost impossible for the common people to purchase any of the other deadly poisons. Blindness is very prevalent in China, and is largely due to small-pox as well as to neglected ophthalmia of new-born children and adults. Congenital blindness is said to be very rare. The diseases due to the long-continued use of opium, such as diarrhœa, dysentery, and a papular affection of the skin, are both very common and almost incurable. Œsophageal stricture is not infrequent, and seems to result from excessive drinking of native spirits, which contain large quantities of fusel oil. "Harakiri" is the term applied to a form of self-destruction in which the individual rips his abdomen open from the pubes to the sternum. One such case in a man aged eighty came under treatment in 1882. The large wound, through which the omentum, though not the intestines, protruded, was sewn up, and the patient ultimately recovered. Several fatal cases of hydro-

phobia have occurred during the past few years, and rabies is very common among the dogs of Peking. The efforts to reclaim the victims of opium-smoking occupy much of the time and attention of the medical missionary. Amongst the curious superstitions of the Chinese the following one may be mentioned. During pregnancy the woman is supposed to have four eyes, and her husband is credited with a like number of visual organs. Under such circumstances the belief exists that the husband cannot perspire. A pregnant woman came one day to the hospital beseeching for some medicine to cause abortion, in order that her husband, who was in a fever, might be able to perspire. It was supposed that if perspiration could be induced his life would be saved.

"NON-COMBATANTS."

"RIFLE firing had ceased; and the doctors, who had shared with a courage and zeal beyond all praise in all the dangers of the day, had got a temporary hospital in order, and were each doing his utmost to alleviate the sufferings of our wounded. Surgeon-Major Fergusson, the principal medical officer, Surgeons Briggs, Parke, Dick, Maconochie, and others, with the regimental surgeons, worked untiringly through the night helping the wounded." This was at Abu Klea. A war correspondent is the witness. It is the same story all through: the doctors share "all the dangers," and yet, because they do not draw their swords and rush at the foe, they are pooh-poohed as "non-combatants." Happily, the cold recognition of medical services does not cool the courage of our brethren in arms, as we may perhaps, in a journal which is "only civilian," be permitted to call them.

BABY-FARMING IN FRANCE.

THOUGH the birth-rate in France cannot be increased by any Parliamentary enactment, legislation has certainly contrived to protect the lives of such children as are born. In December, 1874, the National Assembly adopted what is known as the "loi Roussel." The results already attained by this measure are most significant and encouraging. According to this law, all persons taking children to nurse are placed under the superintendence of the district prefect of police, assisted by the local authorities, medical inspectors, and committees of lady visitors. Statistics for the year 1883, relating to this work, have just been published; they show that in Paris and its suburbs 20,071 children were put out to nurse. Of this number no less than 15,520 were sent into the provinces; where, however, they also came under the Roussel law. Indeed, this enactment is becoming more and more popular, the nurses themselves finding it to their advantage to submit to its stipulations. Thus, while in 1880 the number of women who claimed official inspection amounted to about 17,000; this figure increased to more than 20,000 in 1883. Of the 4551 children that remained in the immediate neighbourhood of Paris, 2311 were given out to wet-nurses, 1582 were brought up with the bottle, and 558 were undergoing the process of weaning. Of the 414 children who died in 1883, 217 were fed from the bottle and 180 from the breast. Thus the mortality equalled 14 per cent. and 8 per cent. respectively. From 1880 to 1883 the total mortality of children put out to nurse had been reduced from 9·99 per cent. to 9·30 per cent. This improvement is due principally to medical inspection. The doctor attached to this service visits the home of the nurse, and also examines her personally. Of the 15,086 nurses examined in 1883, 355 were declared incapable of acting as wet-nurses, and compelled to content themselves with feeding by hand; while permission to nurse was absolutely refused to 33 applicants. Some improvement has also been realised in the sanitary condition of the homes where the children are kept, and here and there the permission to nurse has been withheld when the dwelling was considered exceptionally unwholesome. In this respect, however, the progress is not so marked. On the other hand, the fact that all persons who nurse infants other than their own are compelled to submit themselves and their homes to medical examination and superintendence has been the means of eradicating many injurious superstitions with respect to the rearing of children, and of spreading knowledge based on a scientific foundation. The French authorities seem, among other things, to have waged successful war against feeding-bottles with long tubes. These contrivances are rarely kept in a state of sufficient cleanliness, and the tubes are fouled long before the contents of the bottle show any signs of decomposition. Altogether, what has sometimes been termed baby-farming on this side of the Channel is rapidly becoming a profession in France offering certain State-regulated guarantees, and constantly imposing on its licensed members a higher standard of excellence.

POWERFUL REFRIGERANTS.

SOME experiments recently made by M. Olszewski appear to show that liquid oxygen is one of the best of refrigerants. He found that when liquefied oxygen was allowed to vaporise under the pressure of one atmosphere a temperature as low as −181·4° C. was produced. The temperature fell still further when the pressure on the liquid oxygen was reduced to nine millimetres of mercury. Though the pressure was reduced still further to four millimetres of mercury, yet the oxygen remained liquid. Liquefied nitrogen, when allowed to evaporate under a pressure of sixty millimetres of mercury, gave a temperature of −214° C., only the surface of the liquid gas became opaque from incipient solidification. Under lower pressures the nitrogen solidified, and temperatures as low as −225° C. were recorded by the hydrogen thermometer. The lowest temperature obtained by allowing liquefied carbonic oxide to vapourise was −220·5° C.

INTEMPERANCE AND PAUPERISM.

SEVERAL different causes have been assigned for the pauperism which is increasingly prevalent in our great cities. It is well that everything which has an influence on this subject should receive due attention at the present time, when the greatness of the evil is rendered more apparent by a general depression in trade, and when the minds of all are turned to consider any possible schemes for the proper maintenance and housing of the poor. The destitute man, if he were now asked to state the cause of his condition, would almost certainly blame the times, and would be largely justified in so doing. Whatever be the origin of the present inaction, whether business competition, the store system, the spendthrift extravagance of many whom a false ambition tempts to live above their means, or other circumstance, the fact remains that work is more difficult to find and to hold than formerly. Nor does the very poor man alone suffer, but the shoe pinches everyone in some degree. This want of employment and lapse of the regular habits which belong to it, have doubtless very much to do with such poverty as is generally felt. It does not, however, account for all the misery of the so-called "outcast" population. Other factors enter into that dismal pressure which rests upon each member of many households, not alone in our days, but even in more prosperous times. It was not for the first time at a recent meeting in Exeter Hall that drunkenness and unthrift were condemned as the twin and chief producers of abject poverty. The connexion between those vices is too much a matter of daily remark to call for proof. It is as real as the opposite

union between thought and thrift. Words are not needed to explain how the poor must go to the wall when trade is slack, if their exchequer, never too full, is in literal liquidation on behalf of a morbid appetite, while the giving hand of the employer is restrained by an enforced economy. On our own part, also, as medical men, we cannot but speak in support of these opinions of the political moralist. Science recommends alcohol to no one who has health; but, on the contrary, enjoins abstinence in this particular to all such, and in reference to all states of labour, mental or bodily, to exposure, worry, and even fatigue. In circumstances of exposure and exhaustion, indeed, testimony goes to prove that such drinks as tea and coffee afford a stay nearly as speedy in action as, and much more trustworthy and enduring than, any that alcoholic stimulants can give.

A NEW TEST FOR BILE ACIDS IN THE URINE.

DR. OLIVER of Harrogate has, during the past week, been demonstrating in several of the London hospitals what he believes to be a new test for the detection in the urine of the derivatives of the bile salts. It is in the form of a test solution, and also in that of test paper. The reaction of the test is founded on the physiological fact that where the bile mingles with the acid solution of peptones in the duodenum, the proteids are instantly and completely precipitated. The test solution is an acidulous antiseptic solution of peptone, and does not present to the urine a constituent extraneous to the organism. When brought into contact with a urine containing a bile-salt derivative, a precipitate resembling that of albumen when thrown down by nitric acid at once appears. By using a standard of opacity to represent the very delicate reaction induced in normal urine, Dr. Oliver showed how the quantity of the bile derivatives, as they appear in the marked deviations encountered in disease, can be readily gauged. He has, we learn, found bile acids plentifully present not only in the urine of jaundice and of other hepatic affections, but in that of several cases of anæmia (simple or idiopathic, leucocythæmic or malarial), and of other morbid conditions; and his observations generally appear to be of some clinical interest. We understand that Dr. Oliver is preparing for early publication the data he has collected.

PROPOSAL FOR A HOSPITAL FOR INFECTIOUS DISEASES IN BARCELONA.

THE Royal Academy of Medicine and Surgery of Barcelona is trying to persuade the municipal authorities to construct a hospital for infectious diseases, the want of which has been very much felt; and with this object in view publishes some suggestions on the subject, of which the following are the most important. The Academy decidedly objects to the plan of building a single hospital to contain a hundred beds, which is the number the new establishment would accommodate, but prefers a number of small pavilions, each devoted to a different form of infectious disease. The City Hospital should, according to the views of the Academy, contain six pavilions—two for "typhus" (for males and females), one each for small-pox, measles, scarlatina, and diphtheria, a movable partition being employed when necessary to separate the sexes. The Academy intentionally refrains from recommending a convalescent pavilion or quarter, because of the risks which would thus be incurred of, for example, a typhoid convalescent contracting scarlatina from some desquamating convalescent. The hospital should be situated far from the city, so that the focus of contagion might be sufficiently removed to be harmless to the inhabitants, and also prevent the possibility of its being stigmatised as the cause of any cases of infectious disease which might occur in its vicinity. The site should be an elevated one, so as to be above the miasms and mists of the low-lying ground, and also to favour the removal of its own sewage, which should be previously disinfected. It should lie to the north of the city, so that it could enjoy as much freedom as possible from the effluvia which the prevailing winds carry with them, and be at some distance from the sea, so as to be beyond the influence of the deleterious emanations from the port and the adjoining marshes. No plantations of trees, except of certain kinds—as, for example, the eucalyptus—should be permitted within the grounds of the establishment. The laying out of the site should be undertaken with special reference to the facility of drainage, and the surface should be covered with cement or other impermeable material.

THE MACLEAN MEMORIAL FUND.

WE observe that Dr. McLeod, secretary to the above Fund, has addressed a circular to Indian medical officers on furlough inviting subscriptions, no one of which is to exceed a guinea. Our readers are aware that it is proposed that the memorial should take the form of a portrait of Professor Maclean, to be hung on the walls of the Netley Hospital, and that, if funds permit, a replica of the portrait will be presented to Mrs. Maclean. Subscriptions should be forwarded, with the least possible delay, to Messrs. Grindlay and Co., 55, Parliament-street, Westminster.

NO MEDICAL OFFICER OF HEALTH.

A NUISANCE connected with a show of fat women, giants, and Zulus having been the subject of much complaint in Woolwich, the Local Board commissioned Mr. Lett, the parochial medical officer (Woolwich not possessing a medical officer of health), to visit and report upon the condition of the premises. He certified them to be in a most dirty state. A discussion arose as to why Mr. Lett had been appointed in preference to other practitioners, and it was stated that it was the usual custom to ask the union medical officer to report upon such cases in his own district. The fee for such report was half a guinea. The case shows the unsatisfactory way in which sanitation is conducted without a medical officer of health. If there had been such an officer, he would probably have taken action in this case some weeks before the board saw fit to issue a special request to the parochial medical officer, whose responsibility, besides, ends as soon as he has made his report.

THE VACCINATION LAWS.

MR. HANNAY, of Worship-street Police-court, has granted a warrant to levy on the goods of a person in Hackney for non-compliance with the Vaccination Acts, with the approval of the Home Secretary. It is unsatisfactory to find Mr. Picton plying the President of the Local Government Board with irrelevant questions on the Vaccination Laws. It is some set off to see that they did not make much impression on this member of the Government, who said there is no falling off in the proportion of vaccinated children to those born, and no intention to propose any further inquiry into the working of the Acts.

DR. ANGUS MACKINTOSH has issued, in the form of a card, a "Memorandum of Infectious Diseases," which presents in a concise form the leading facts known as to the latent period, the time of the appearance and cessation of eruption, and the date at which the patient ceases to be infective after the fever, in small-pox, typhoid, typhus, and scarlet fevers; diphtheria, measles, and whooping-cough. The card is likely to serve a useful purpose, and appears to be drawn up on the best-established data.

FROM the report of the examination made by Colonel Sir Francis Bolton, C.E., of the water supplied by the several metropolitan water companies during the month of January, it appears that the Thames water sent out by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies contained on the whole the same proportion of organic matter as the previous month's samples, the amount being, except in the case of the Southwark and Grand Junction Companies, decidedly below the average for the time of year. Of the water drawn from the Lea, the New River Company's supply contained very much less organic matter than any of the other river waters, whilst the East London Company's water resembled in this respect the average of the samples derived from the Thames. All the samples were clear and bright.

THE Hon. Joseph Docker, M.R.C.S. Eng. (1824), L.S.A. Lond. (1832), M.L.C., died at his residence in Sydney on December 11th, in his eighty-third year. Mr. Docker, some time after settling in New South Wales, became a member of the Legislative Council, and in 1866 Postmaster-General. In 1868 he was appointed to the office of Colonial Secretary, and in 1870 again became Postmaster-General, remaining in office until 1872. In 1875 he was Minister of Justice and Public Instruction, and latterly he filled the office of Chairman of Committees in the Upper House.

AT Sydney, on December 10th, Dr. Donovan, charged by the Board of Health under the Infectious Diseases Suppression Act with failing to report a case of eruptive fever reasonably supposed to be small-pox, was fined £50, the highest penalty, or in default three months' imprisonment. On the 16th of December Dr. Donovan was again prosecuted for neglecting to report three other cases of small-pox which had come under his treatment, and, pleading guilty, was in each instance mulcted in the same penalty as on the previous occasion.

THE Canal Boats Act of last year is being carried out with vigour by the Local Government Board, an inspector having already visited many of the lines of canal traffic and reported on the action of the local sanitary authorities in regard to what the law requires. It is, however, stated that local bodies have to a great extent failed to enforce the provisions of the Act, and a circular letter is about to be addressed to them urging them to bestir themselves.

RUMOURS deemed false having been circulated as to the cause of the death of the great painter M. Bastien Lepage, Dr. Watelet, his medical attendant, wrote to the *Matin* stating what, in his opinion, was the true cause. The *Temps* has recently announced that a prosecution *ex officio* of Dr. Watelet is being undertaken for violation of professional secrecy, and against the *Matin* as his accomplice in the misdemeanour.

PLAGUE is stated to have broken out at Ojagh, sixty miles from Hamadan. Ninety deaths have been already recorded. Measures have been taken to prevent the spread of the disease.

MESSRS. LONGMAN will very shortly issue a new edition, edited by Dr. Lauder Brunton, of Murchison's "Clinical Lectures on Diseases of the Liver, Jaundice, and Abdominal Dropsy."

AT a meeting of the Medical Society of Bordeaux, M. Durodié exhibited a case of sweating limited to the right side of the body in a man aged fifty.

THE first annual report of the Medical Women for India Fund has been issued. The receipts have amounted to 41,842 rupees, and the disbursements to 13,799 rupees. Twelve female students have completed their first year of study at the Grant Medical College in a satisfactory manner.

A MEMORIAL in favour of Dr. Bradley, signed by ninety-six members of the medical profession of Sheffield and its vicinity, has just been forwarded to the Home Office.

THE fourth meeting of the German Medical Congress will be held at Wiesbaden on April 8th and three following days, under the presidency of Professor Frerichs.

MR. G. BAINBRIDGE has been appointed to act as Professor of Surgery in the Grant Medical College, Bombay, vice Mr. W. Gray, on furlough.

ZIEMSSEN'S Cyclopædia is being translated into Spanish by Dr. Francisco Vallina, and is being published in Madrid in monthly parts.

DR. COOK has been elected Dean of the Medical Faculty of the Bombay University, vice Mr. Hojel.

Pharmacology and Therapeutics.

"CONSTANT" TINCTURES.

IT is a fact which has long been familiar to every practical therapeutist that all the pharmacopœial tinctures may vary enormously in strength and in the proportion of active ingredients they contain. A patient, let us say, is taking tincture of belladonna; the dose is gradually and cautiously increased, and no ill effects result. In consequence of a change of residence or from some other accidental cause the prescription is dispensed by another chemist, and suddenly, and without any apparent reason, the full physiological action of the drug is produced, the physician is discredited, and the life of the patient is placed in imminent danger. This is no fancy sketch, for we have known this occur quite recently in London under circumstances almost identical with those we have indicated. The fact is—and it cannot be too generally known—that such terms as "tincture of belladonna," "tincture of opium," "tincture of nux vomica," and so on, have no definite meaning. For example, one specimen of tincture of nux vomica may contain just twice as much strychnia as another. There is a growing tendency, especially in hospital practice, to obtain drugs at the lowest possible rates, and in many cases the price paid is so low that it would be impossible for any druggist to supply a really trustworthy article for the money. It of course looks well in an annual report to be able to state that the expenditure on drugs is much less than it was in the previous year, and that the cost per head is less than at any other hospital; but these results are too often obtained at the expense of the sick and suffering, who at all events have a right to expect that they will have the best medicines obtainable. We are glad to see that a firm of chemists so well known as Messrs. Squire and Sons of Oxford-street have determined to do their best to oppose this pernicious system. They keep only one quality of tinctures, and these are standardised. Their method of procedure is as follows:—They obtain a typical specimen of the pure crude drug, which is then "hand-picked"; that is to say, all doubtful and damaged seeds or leaves, or whatever it may be, are rejected and thrown away. A tincture is then prepared according to the pharmacopœial process, and the amount of alkaloid—or of combined alkaloids, should there be more than one—is ascertained by actual analysis. This is repeated several times, and the mean of these results is taken as the standard. Every batch of tincture subsequently prepared is analysed in the same way, and, by the careful addition of crude drug or of spirit, as the case may be, is made to conform to this standard. Tinctures so prepared are called "constant tinctures," a

term which undoubtedly expresses in a convenient form their chief characteristic. The advantage of having a tincture which is always of one strength is incalculable, and Messrs. Squire and Sons undoubtedly deserve the best thanks, both of doctors and patients, for the enormous labour they have undertaken in connexion with this subject. We have given these tinctures a prolonged trial, extending over some months, and can speak of them in the highest possible terms. They are very little dearer than the common tinctures (only a few pence in the pound), and we trust that the day is not far distant when they will be in use in every hospital throughout the country.

SWEET SPIRITS OF NITRE.

The composition of sweet spirits of nitre and kindred preparations is a subject which seems destined to disturb the equanimity of dispensers and pharmaceutical chemists. It is stated that the Council of the Pharmaceutical Society have recently thought it necessary to convey their views on the matter to the authorities of the Inland Revenue at Somerset House. The exact nature of their communication is not known, but it is understood that the Council maintain that there is no positive evidence that the medicinal value of sweet spirits of nitre depends on the presence of nitrous ether, and that any specimen which is of proper specific gravity, and gives indications of containing *some* nitrous ether, may be regarded as having been prepared according to the directions of the British Pharmacopœia. With respect to the sweet spirits of nitre of the old London Pharmacopœia, they are of opinion that the proportion of nitrous ether which it contains often amounts to little more than a trace, and that the only tests necessary to show that such an article may be considered to be of good quality are those of odour, flavour, and specific gravity. They further state that the tests laid down in the British Pharmacopœia, and other tests devised with a similar object, cannot be supposed to be applicable to preparations sold for domestic use. A common argument used by druggists is, that an article supplied by a large manufacturer chiefly to medical men has a density of ·887, and that although it contains little or no ethyl nitrite, few complaints are made. These views, we must admit, have taken us somewhat by surprise. It would seem that the authorities of the Pharmaceutical Society are of opinion that the absence of the chief constituent from a preparation is a matter of very little importance if only the omission is not detected. This is a code of morality to which we are unaccustomed, and we are decidedly of opinion that no pharmacist or body of pharmacists has any right to change the character of a well-known preparation, or to supply an article essentially different from that which the medical man supposes his patients are taking. It is a subject of considerable importance, and one by no means which should be overlooked.

HYDROCOTYLE ASIATICA.

There can be no doubt that there are in common use in India many drugs the properties of which might be investigated with advantage with the view to their introduction into practice in this country. We understand Messrs. T. Christy have just received a large consignment of Hydrocotyle asiatica, a plant which in the East bears a high reputation in the treatment of leprosy, syphilitic and skin affections, ozæna, and a number of other diseases. At present very little is known with certainty about it; but we understand that it belongs to the natural order umbelliferæ, and that it has many native names, the most common of which are "Bráhmamanduki," "khulakhudi," and "thalkuri." It grows freely in the neighbourhood of Bombay, although it is more frequently found in gardens than running wild. It flowers abundantly if watered, sending out long runners like the strawberry, and producing leaves and root and fruit at the joints. The fresh herb has an aromatic ivy-like odour, and when crushed a nauseous bitter taste; but these qualities are to a great extent lost on drying. Its properties have recently been investigated by Mr. A. Jayesingha, sub-assistant colonial surgeon of the Government Dispensary, Ballapitimodera, Ceylon, and we have been favoured with a statement of his results. The drug was administered in the form of powder in ten-grain doses three times a day. It was also used locally as a poultice to ulcers, as a snuff in ozæna, and as an ointment mixed with lard in various skin diseases. The list of cases treated includes two of parangi, five of ozæna, two of leprosy, three of itch, two of secondary syphilis, one of herpes zoster, seven of parangial ulcer, and three of common ulcer. In twenty-one of these cases a cure was effected, or at all events the patient obtained marked relief. The failures are attributed to the irregular way in which many of the patients attended at the dispensary.

ARMY AND INDIAN MEDICAL SERVICES.

IN the papers on the subject of the Indian Army reorganisation, printed by order of the House of Commons, there is an interesting document on the Medical Service in India. The Reorganisation Commission pointed out the importance of abolishing the costly system of maintaining a double staff, and submitted their views of the mode in which this change should be effected. The Government of India were fully impressed with the necessity for a radical reform of the Medical Service, and were satisfied "that the needful improvement, both economical and administrative, is to be found only in some measure of unification." They were not, however, satisfied with the scheme proposed by the Commission, and invited the two heads of the Medical Service in India, Dr. Crawford, Surgeon-General to Her Majesty's Forces (now Director-General of the Army Medical Department), and Dr. Cuningham, Surgeon-General with the Government of India, to prepare a memorandum on the subject based upon two conditions which were deemed essential: "First, that there should be only one medical service for India; and, secondly, that complete authority over the medical service serving in India, as to employment, distribution, and remuneration, shall rest with the Government of India." A joint memorandum, prepared by these two officers, and dated Simla, 12th August, 1881, was submitted to the Government, and considered by them "to satisfy all the essential conditions of the case and to provide a satisfactory solution of the difficulty." It is a document of some length and bears evidence of careful consideration, having regard to efficient and economical administration and to respect for the rights and privileges of the existing officers. The memorandum recommends that there should be but one medical department, to be styled the Royal Medical Service, and to be divided into two branches, one for general and the other for Indian service, but that in any national emergency the Indian branch should be available, with the sanction of the Indian Government, for service in any part of Her Majesty's dominions; and the general branch, with the sanction of the Home Government, for service in India. It proposed that the Indian branch should be recruited by volunteers from the general list of officers under three years' service, that they should form one service for all India, primarily military, but also civil; the first two years to be spent in strictly military duty; after that period officers to be eligible for civil employ if they have passed the language test, but liable at all times to be recalled for military service if wanted. After ten years' continuous civil service, if they do not return to military duty, they must look for promotion to the administrative grade in the civil branch only. It is recommended that exchanges should be freely allowed between the general and Indian branches, but no Brigade Surgeon of the Indian branch to be eligible for promotion to Deputy Surgeon-General of that branch unless he has had five years Indian service above the rank of surgeon, and no Deputy Surgeon-General to be allowed to exchange into the Indian branch who has not had this qualifying service. Transfers also should be permitted from one branch to the other, when required in the interests of the service, and subject to the concurrent approval of both Secretaries of State. The memorandum proposes one administrative head, with the Government of India, for the whole Indian Medical Service, with a special rate of pay, who should recommend for all departmental promotions, and distribute officers to the several sections requiring them, civil, military, and sanitary; transferring medical officers from military to civil service and *vice versâ*, as may be necessary, but not interfering with the employment of any officer after being so posted, which would rest with the administrative medical

officer immediately concerned. The Indian Director-General "would communicate with the Director-General of the Royal Medical Service in all matters regarding recruiting, exchanges, and transfers, and would report all casualties by death, retirement, &c.; he would also, as Sanitary Commissioner, prepare, as at present, an annual sanitary report for the whole of India." Under the Director-General there would be a Surgeon-General for the army, on the staff of the Commander-in-Chief, charged with the medical administration, and having the control of the medical staff of the forces, and provided with the necessary administrative staff. The civil medical administration would continue much as at present, but without the local rank of Surgeon-General, the chief in each local government and administration being designated simply as "Principal Medical Officer." Such are the most important of the recommendations for the reorganisation of the Royal Medical Service. For the subordinate civil service, it is proposed to constitute an "Indian Medical Service," consisting of two classes—Assistant Surgeons and Civil Medical Officers, recruited from natives of India who are licentiates or graduates of medicine of an Indian college, the admission to be by competitive examination and the promotion by seniority on passing an examination test, but with power to promote specially assistant-surgeons who have distinguished themselves, or for the Governor-General to appoint direct to the higher grade should he think fit. The officers of this branch of the service to be liable to be called upon, on emergency, to perform work in military hospitals within their own province, or with troops of their own province serving elsewhere.

The reporters have fully considered and reported the mode in which this proposed system may be carried out with greatest advantage to the service and without inflicting any injustice upon the officers now serving, but it does not appear necessary here to enter upon such details. They also have discussed the question of pay and allowances, and recommended the abolition of the distinction of *unemployed* pay—a recommendation which has been already acted upon. We are glad to find also that they call attention to the injustice so frequently inflicted on officers who are required to pay their own expenses on being removed to a new charge. "An officer so moved from a doing-duty, or a so-called 'unemployed,' position to an officiating medical charge, which may not bring him more than one hundred rupees a month, but who, in consequence of the increased rate of pay he will draw, is obliged to join at his own expense, is frequently involved in expenses which months of such allowances will not cover." We trust that this regulation, against which we have so frequently protested, will soon be abolished, and one of the causes of justifiable discontent on the part of the Indian medical officers be thus removed. They also recommend a revision of the regulations by which charge pay is drawn by officers going on furlough or accepting civil appointments, while the officer who actually discharges the duty receives only a modified allowance; the rule adopted in the Army Medical Staff should be followed, that charge money be drawn by the officer on whom the duty and responsibility devolve.

A letter from the Under Secretary of State for War reviews these recommendations, and states that Mr. Childers, who was then Secretary of State, did not concur in the views of the reporters. The principal grounds of dissent were that he thought the proposed change would have the effect of diminishing the supply of candidates, as "the attraction of Indian service as an inducement held before the whole body of candidates would be seriously diminished;" that the least eligible of the candidates would be left for the British branch of the service; that both India and Great Britain would be losers in the matter of varied experience on the part of medical officers; and that the proposed scheme would be more expensive to India than a simple unification. Mr. Childers approved, however, of the proposal for the amalgamation of the two services, and suggested that, as the number of appointments to be supplied by the Army Medical Department would be increased, the term of five years for service in India should be raised to seven, and that an officer selected for a civil appointment should be allowed to volunteer for another term of seven years.

We have endeavoured to summarise as briefly as possible the recommendations contained in the memorandum. It gives the carefully considered opinions of two officers of long and varied service, representing the two branches of the existing Medical Service. The dual service in India has already been considerably modified, and it appears desirable, in the interests alike of the public and of the officers of the Medical Service, that still further improvements should be introduced. The form which these should take is clearly laid down in the memorandum now published, as well as the objections to it from a War Office point of view. It is obvious that the present system of two distinct and independent services working together in India is open to very serious objection, and that measures must be adopted to remedy the inconvenience and reduce the expense arising from such an arrangement. The principles laid down by Dr. Crawford and Dr. Cuningham appear well calculated to effect these objects, and at the same time to preserve intact the rights of the officers in accordance with the conditions of the warrants under which they joined the service. Whatever form of departmental organisation may be adopted, we trust the Government will give due effect to the recommendations bearing upon the existing system of charge pay and of travelling expenses.

POOR-LAW MEDICAL OFFICERS AND THE MEDICAL REGISTER.

AT a meeting of Council of the Poor-law Medical Officers' Association, held at their rooms, 3, Bolt-court, Fleet-street, on March 3rd, attention was drawn to the case of Mr. H. C. Linden, district medical officer of the Bingham Union, Notts. This gentleman had applied for and obtained a Poor-law medical appointment, his election to which was annulled by the Local Government Board on account of his name not appearing on the Medical Register through his not apprising the Registrar of his change of residence. Proof having subsequently been given to the board of guardians that his name had been restored to the Register, he was re-elected; but on his applying for his quarter's salary he was told by the clerk that the Local Government Board had declined to sanction the payment. The Council desires to express its opinion that a great injustice has been done to Mr. Linden, and that he is entitled to the sympathy and support of the profession, and it also wishes to impress upon Poor-law medical officers the importance of immediately informing the Registrar of any change of residence.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Alnwick and Canongate Urban District.—The mortality during 1884 was at the rate of 20·3 per 1000. The need for some means of isolation has often been referred to, and during the cholera prevalence of last year there was some hope that it would at last be provided. But the disease did not reach beyond the coast line and the matter appears again to be set aside. Hence Dr. Davidson once more presses it, and he shows that for scarlet fever alone it is much needed. Diarrhœa was somewhat exceptionally prevalent, and phthisis is also a leading disease of the place, the cause of the latter disease being attributed to the wetness of the subsoil and the breathing of vitiated air due to deficient ventilation and to overcrowding. Some parts of Alnwick are in a notoriously bad condition; one locality is described in the report as disgraceful, and in many of the yards surrounded by tenemented houses the same description would hold good. The soil is sodden with filth and water, and in summer foul emanations are the result. Old bye-laws are in force which fail to meet pressing sanitary needs as regards new buildings, and the committee appointed to deal with the matter does not appear to further the object required with the needed promptitude. As regards the common lodging-houses, the state of affairs which inspection has revealed is such that it cannot, we hope, be allowed to continue. Alnwick has just now an unenviable notoriety. The public have complained of its condition, a coroner's jury have blamed the authorities, and the Local Government Board have directed inspection of its sanitary state. Notwithstanding the changes in the post

of officer of health, Dr. Davidson does not fail faithfully to show the authority the direction in which its future work should lie; and we trust that both for the sake of the inhabitants whom they represent, and for their own sakes, the Town Council will during the present year set themselves earnestly to work.

Stroud Urban District.—The town has a death-rate of 17·2 per 1000, and a birth-rate of 21·3. The number of uncertified deaths amongst infants is high, and Mr. Partridge attributes it to an important extent to the practice which prevails amongst ignorant mothers of dosing their children with soothing syrups and other nostrums instead of securing that medical aid which is open to the poorest in the country. Some enteric fever and diphtheria have occurred in connexion with the use of polluted well water, and, as a result, some extension of the town mains has been made. Inspection of bakeries, slaughter-houses, &c., continues, and a good list of sanitary work is recorded.

Stroud Rural District.—In this rural district certain works of drainage are in progress; the water-supply is subject to frequent and careful inspection, all suspicious sources being examined and dealt with. Horsley is spoken of as being much in need of a proper supply in place of the present one, which is subject to the risk of pollution. Stonehouse, which has more than once been to the front as a place needing sanitary measures, is again referred to in connexion with the prevalence of enteric fever. The place is, however, now being drained.

Huntingdon Rural District.—In the Alconbury and Sawtry division of this district steady work is in progress as to the prevention of disease and nuisance. Alconbury brook has been cleansed in so far as the duty devolved on private owners, and so a large improvement has been effected; but further action in the same direction is required by the authority. Sawtry is also in urgent need of a good water-supply. The death-rate for the district was 13·3 per 1000 during 1884. There was one death from scarlatina and two from non-spasmodic croup.

St. George, Hanover-square.—During the year ending March 25th, 1884, this parish exhibited a lower death-rate than for years past—namely, one of 15·7 per 1000. Apart from diphtheria, infectious diseases caused but few deaths, and a majority of the diphtheria deaths occurred in St. George's Hospital. The report is in the main statistical; but the inspector of nuisances compiles a goodly table, showing the current sanitary work of the year; and Dr. Corfield shows also that a large amount of disinfection is carried out in the hot-air chamber with which the parish is provided. In view of the possibility of cholera appearing, arrangements were made for the isolation of the sick. Dr. Corfield communicated with the Duke of Westminster as to the site he regarded as the one most applicable, and the Duke gave his assent, and went so far as to issue notices to the then occupiers to quit. Fortunately, no use had to be made of the permission thus acquired.

Woodford Urban District.—Dr. Groves attributes some occurrences of diphtheria to emanations from sewer ventilators which open on the road level, and he quotes THE LANCET as endorsing his views on the subject. On this matter being brought before the authority they determined to make inquiry of the sanitary authority of Surbiton, where, according to Dr. Groves, a system of ventilating the sewers at a high level is in existence. The death-rate in Woodford was 14·2 per 1000 during 1884 and 12·1 in 1883, and so far as the medical officer of health can ascertain there was not last year even a single case of enteric fever.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5937 births and 3660 deaths were registered during the week ending the 28th ult. The births exceeded by 123 and the deaths by 33 the average weekly numbers during 1884. The annual death-rate in these towns, which had steadily declined in the preceding four weeks from 24·5 to 20·5 per 1000, rose again last week to 21·4. During the first eight weeks of the current quarter the death-rate in these towns averaged 22·8 per 1000, against 24·6, the mean rate in the corresponding periods of the nine years 1876-84. The lowest death-rates in these towns last week were 13·9 in Portsmouth, 14·3 in Huddersfield, 15·7 in Hull, and 16·9 in Halifax. The rates in the other towns ranged upwards to 29·6 in Sunderland, 30·3 in Newcastle-upon-Tyne, 31·7 in Cardiff, and 32·2 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 398 and 384 in the previous two weeks, further declined last week to 377; they included 113 from whooping-cough, 102 from measles, 44 from scarlet fever, 32 from "fever" (principally enteric), 31 from diphtheria, 31 from diarrhœa, and 24 from small-pox. No death from any of these zymotic diseases was recorded last week either in Derby or in Halifax, whereas they caused the highest death-rates in Preston, Norwich, Cardiff, and Sunderland. The highest death-rates from whooping-cough occurred in Preston, Bristol, Wolverhampton, and Norwich; from measles in Cardiff and Sunderland; from scarlet fever in Preston; and from "fever" in Norwich. The 31 deaths from diphtheria in the twenty-eight towns included 16 in London, 3 in Nottingham, 3 in Liverpool, and 2 in Leeds. Small-pox caused 38 deaths in London and its outer ring of suburban districts, 2 in Birmingham, 2 in Sunderland, 1 in Brighton, and 1 in Liverpool. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 1223 and 1141 on the preceding two Saturdays, further declined to 1103 at the end of last week; the admissions, which had been 255 and 163 in the previous two weeks, were 170 last week. The Highgate Small-pox Hospital contained 98 patients on Saturday last, 19 cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had steadily declined in the preceding four weeks, from 556 to 343, rose again last week to 384, but were 105 below the corrected weekly average. The causes of 79, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, Leicester, Portsmouth, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Sheffield, Preston, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight Scotch towns, which had steadily declined from 30·2 to 23·1 per 1000 in the preceding four weeks, rose again to 24·6 in the week ending the 28th of February, and exceeded by 3·2 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 13·3 in Perth and 16·0 in Edinburgh, to 26·2 in Dundee, 29·0 in Glasgow, and 35·2 in Paisley. The 600 deaths in the eight towns included 31 which were referred to whooping-cough, 17 to scarlet fever, 15 to measles, 11 to diarrhœa, 6 to "fever" (typhus, enteric, or simple), 2 to diphtheria, and not one to small-pox; in all, 82 deaths resulted from these principal zymotic diseases, against 95 and 81 in the preceding two weeks. These 82 deaths were equal to an annual rate of 3·4 per 1000, which was 1·2 above the mean rate from the same diseases in the twenty-eight English towns. The 31 deaths from whooping-cough showed a slight further increase upon the numbers in the previous two weeks. The fatal cases of measles, which had been 25 and 21 in the previous two weeks, further declined to 15 last week, of which 12 occurred in Glasgow and 2 in Dundee. The 17 deaths from scarlet fever, however, showed a considerable increase upon the numbers in recent weeks, and included 14 in Glasgow and 2 in Paisley. Of the 11 deaths attributed to diarrhœa 5 occurred in Dundee. The 6 deaths referred to "fever" were considerably below the average. Both the fatal cases of diphtheria (a lower number than has been returned in any recent week) occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had declined in the preceding four weeks from 214 to 139, further fell last week to 125, but exceeded the number returned in the corresponding week of last year by 17. The causes of 17, or nearly 12 per cent., of the deaths registered last week in the eight Scotch towns were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 36·2, 34·9, and 30·4 per 1000 in the preceding three weeks, further declined to 30·3 in the week ending the 28th ult. During the first eight weeks of the current quarter the death-rate in the city averaged no less than 32·7 per 1000, the mean rate during the same period not exceeding 21·9 in London

and 20·6 in Edinburgh. The 205 deaths in Dublin last week showed a further decline of 1 from the numbers in recent weeks, and included 18 which were referred to the principal zymotic diseases, against 20 in each of the previous two weeks. Of these 18 deaths, 8 resulted from measles, 6 from scarlet fever, 2 from whooping-cough, 1 from "fever" (typhus, enteric, or simple), 1 from diarrhœa, and not one either from small-pox or diphtheria. These 18 deaths were equal to an annual rate of 2·7 per 1000, the rate from the same diseases being equal to 1·8 in London and 1·9 in Edinburgh. The fatal cases of measles in Dublin, which had been 10 and 11 in the preceeding two weeks, declined to 8 last week; the deaths from scarlet fever, on the other hand, rose to 6 last week, from 3 in each of the previous two weeks. Only 2 deaths from "fever" have been recorded in the city in the past fortnight, whereas they averaged 4 per week in the first seven weeks of this year. Seven inquest cases and 2 deaths from violence were registered within the city; and 61, or nearly a third, of the deaths were recorded in public institutions. The 39 deaths of infants showed an increase upon the number in the previous week, while the deaths of elderly persons were fewer than in any previous week of this year. The causes of 34, or more than 16 per cent., of the deaths registered in the city last week were not certified.

CLASS MORTALITY IN DUBLIN.

The death-rate in Dublin last year was equal to 27·9 per 1000 of the estimated population in the middle of the year. This high rate of mortality, although showing a decline of 1·3 per 1000 from the mean rate in the preceding ten years, bears most unfavourable comparison with the rates prevailing in the capitals of the other portions of the United Kingdom. In London the rate last year did not exceed 20·3, and in Edinburgh it was only 20·0. In the Registrar-General's yearly summary for Dublin and other large Irish towns further statistics are published with a view to elucidate that interesting but difficult problem of class mortality. The recorded death-rates during 1884 in the families of eighteen different occupational subdivisions grouped in five social classes are given in this report. Class mortality, as distinct from occupational mortality, is a branch of vital statistics that has not yet secured its due share of attention, in great measure owing to the inherent difficulties which the subject presents. The figures published by the Registrar-General of Ireland bearing upon class mortality in Dublin, crude as they are at present, form a welcome addition to our slender knowledge on the subject. Some time since, when we noticed these class death-rates in Dublin, we pointed out that such rates of mortality were practically useless for comparative purposes unless due allowance was made for the wide differences of age distribution in the various social classes. In order to estimate the true import of a death-rate, it is absolutely necessary to know the age constitution of the population upon which it is calculated. We have been pleased to notice that the Registrar-General of Ireland now affords the means for correcting his class death-rates for differences in the age constitution of the population in the several classes. A table is published in the yearly summary, recently issued, giving the ages of the Dublin population in each social class, and in each group of occupations for which the deaths are given. This information affords the necessary assistance for calculating the disturbing influence of age distribution upon this recorded class mortality. By applying standard life table rates of mortality to the varying proportions of persons living at five groups of ages in the four social classes adopted by the Registrar-General of Ireland, we find that the normal death-rate ranged from 19·5 per 1000 in the Middle class, to 25·2 in the Professional and Independent class. Bearing in mind that this difference of 6·3 per 1000 is entirely due to difference of age distribution in the living population of each class, it is impossible to doubt that the recorded death-rate in these two classes is useless for comparative purposes, unless due correction be made for this disturbing influence. The explanation of this important effect of age distribution upon recorded class death-rates is patent. It will be found from the Registrar-General's table to which we refer that in the Professional and Independent class population 15·8 per cent. are persons aged upwards of sixty years, whereas in the Middle class only 4·8 per cent. are returned at the same group of ages. This remarkable difference in the age distribution of two classes, between which the barrier must be ill-defined and more or less artificial, points to difficulties of classification of the social class and occupation of living and deceased persons, to which we shall probably hereafter refer.

THE SERVICES.

THE EGYPTIAN EXPEDITION.

We learn from our Indian contemporaries that the following Indian medical officers proceed on active service with their respective regiments forming the Indian contingent for the Soudan:—Surgeon-Major G. Hutcheson, M.D., 9th Bengal Cavalry, to which is attached for duty Surgeon G. Jameson; Surgeon-Major Kelly, M.D., 15th Sikhs; Surgeon-Major R. T. Lyons, M.D., 17th Bengal Infantry; Surgeon F. Burness, M.B., 28th Bombay Infantry; and Surgeon-Major R. V. Power, M.D., 12th Madras Infantry.

At Aldershot a further draft of the Medical Staff Corps, the officers and men for which have been drawn together from various outlying stations, is being prepared, and will probably embark at the end of the week for Suakim.

The Indian troopship *Crocodile* left Portsmouth on the 4th inst. for Bombay, having embarked, amongst other officers, on the previous day, Surgeon-Major Macpherson and Surgeons Dodd and Hunston, medical staff.

The Greenwich Hospital pension of £50 per annum, vacant by the death of Deputy Inspector-General of Hospitals and Fleets Alexander Crawford Macleory, has been awarded by the Lords Commissioners of the Admiralty to Deputy Inspector-General of Hospitals and Fleets William Hoggan.

WAR OFFICE.—Army Medical Staff:—The following officers are granted the local and temporary rank of Deputy Surgeon-General whilst serving with the Expeditionary Force, Suakim: Brigade Surgeon George Langford Hinde; Brigade Surgeon Samuel Black Roe, M.B., C.B. Surgeon-Major John Candy, M.D., has retired upon temporary half-pay.

ADMIRALTY.—Staff Surgeon Richard William Coppinger, M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet.

RIFLE VOLUNTEERS.—3rd Lancashire: Andrew Alexander Watson, Gent., to be Acting Surgeon.—2nd Battalion, the Queen's Own (Royal West Kent Regiment): Henry William Roberts, Gent., to be Acting Surgeon.

Correspondence.

"Audi alteram partem."

SLOW PULSE, WITH EPILEPTIFORM SEIZURES.

To the Editor of THE LANCET.

SIR,—The interesting case narrated by Dr. Gibbings in your issue of Feb. 14th reminds me of one, the notes of which I have long had by me with the object of publishing whenever a suitable occasion should present itself. I was much interested in it because it seemed to me to show conclusively the effect of cerebral anæmia in the causation of epileptic or epileptiform attacks.

The following is a copy, with only a few verbal alterations, of the case as I wrote it out at the time.

W. P——, aged thirty-one, was admitted under the care of the late Dr. Goolden on May 4th, 1869. He had been a soldier, and was in India for four years, during which time he contracted syphilis and suffered from "fever and ague." Was discharged after twelve years' service on account of "weakness of constitution." He has never had rheumatism, and never suffered from shortness of breath or palpitation previously to his present illness. This came on two weeks before admission. At that time, under some mental excitement, he jumped over some palings in order to prevent a fight. He was immediately attacked with faintness, but recovered from it very shortly. The next morning in bed he woke up with "heavy" breathing, which also soon subsided. In the evening it returned, and he had a fit in which he lost consciousness. From that time he has had to give up work, and attacks of dyspnœa, followed by losses of consciousness, have recurred frequently night and day up

to the time of admission. The fits have all been preceded by "faintness at the chest," followed by flushings, on the occurrence of which insensibility has supervened. He once bit his tongue slightly. Has had no pain in the chest or elsewhere. He was ordered to take quinine and iron and two glasses of wine.—14th: I saw him to-day for the first time, and learnt that almost constantly since admission his pulse had been beating very slowly, sometimes not more than 26 in the minute, and that he had had frequent fits night and day. These had been of very short duration and attended with a little struggling. He had been carefully watched by several of the advanced students in some of these fits, and according to them it seemed clear that the fits always came on at the end of an unusually long interval between successive cardiac beats; that while the pulse was at the rate of one beat in three seconds, or even four seconds, no fit occurred; but that whenever, and only when, the intermission was prolonged to five seconds a fit followed at the end of that period. He is free from fits this morning, and his pulse is beating regularly at the rate of 26 in the minute. There is a loud roaring systolic murmur above and to the right of the apex, and prolonged thence to the base.—18th: No fit from the 14th to the 17th; but since the middle of yesterday, and especially during the night, the fits have been very frequent. They vary in length, but insensibility only lasts for a few seconds. He becomes very pale before each fit, then flushes, and while insensible his hands twitch a little. When I saw him the fits had ceased, but the pulse was very irregular. A few regular beats at the rate of 80 in the minute were followed by one or two beats occurring at intervals of about three seconds. Systolic murmur loudest towards the base. A little later his pulse was quite regular at 80 per minute. —21st: Has had frequent fits night and day since the 18th, and has had several this morning. At the time of my visit the pulse is somewhat more irregular than it has been. There is an interval sometimes of three seconds, sometimes of four, without a beat, and then follows a succession of beats at the rate of 80 per minute. On listening to the heart, its sounds correspond accurately to the pulsations at the wrist; but between all the beats (attended with sound and perceptible at the wrist) separated from one another by intervals of between two and four seconds, there are one, two, or three slight impulses of the heart distinctly to be felt, and seen by the imparted movements of the stethoscope. These latter beats are wholly unattended by cardiac sound or pulsation in the arteries. It seems to me that the action of the heart is quite regular as to rhythm, but that many of its beats are ineffectual. These intermediate impulses are felt at the base of the heart; are they due to the action of the auricle or to the hardening of a relaxed but empty ventricle?—25th: Has been pretty free from fits, but had a slight one last night; slept well; feels better. Pulse about 80, but irregular. Rough murmur, loudest and roughest towards the base.—28th: No fits, but occasional sensation as if they were coming on. Pulse 58, regular.—June 1st: No fits; pulse 72, occasionally a little irregular; murmur as before; complains of pain in left shoulder, running down inner side of the upper arm.—4th: No fits; pulse 72, quite regular; feels much better.—8th: No fits, but pulse irregular; murmur as before; feels well. On this day he left the hospital, but he attended as an out-patient until the 21st. During this time, though his pulse continued to be somewhat irregular, he remained free from shortness of breath, palpitation, and fits, and expressed himself as feeling fairly well. I never heard of him subsequently. What my views of the morbid anatomy of the case were formerly I have not recorded, and do not recollect. I am inclined now to suspect that the cardiac disease was syphilitic.

It may be interesting in relation to the above case to record another in which similar epileptiform fits were the consequence of the opposite condition of temporary cerebral congestion. About ten years ago I was consulted by a gentleman sixty years of age, who was very fat and had been liable to bronchitis for many years. For several weeks or longer he had been suffering from severe prolonged paroxysmal attacks of cough with whooping inspiration, in the course of which he frequently became insensible and slightly convulsed for a few seconds. In my consulting-room one of these paroxysms of cough came on. It was much like an attack of whooping-cough, and after it had lasted for some time (half a minute or a minute) respiration suddenly ceased, he became increasingly livid in the face, his head fell upon his chest, and he was insensible and slightly convulsed for a few seconds. He then came to, and appeared in his usual condition. Whether he was really suffering from whooping-cough or not I do not know. I could not determine that point at the time, but I know that these phenomena continued unchanged for some considerable time after his visit to me, and that even during the next five or six years he still occasionally whooped, and still occasionally lost consciousness during severe attacks. I saw him again six years later, when he was suffering from the effects of advanced bronchitis, and about a month before his death from that disease. Attacks like the above are not uncommon, and occasionally cause death in children suffering from whooping-cough, but so far as I know they are rare in adults. Your obedient servant,

Old Burlington-street, Feb. 16th, 1885. J. S. BRISTOWE.

"WHAT WAS THE CAUSE OF DEATH?"

To the Editor of THE LANCET.

SIR,—As you have alluded to the case of the Norwegian sailor, Johnson, under the above heading in your issue of Feb. 21st, I hope you will allow me to explain briefly the facts. They are as follows:—

About 1 A.M. on the morning of Jan. 2nd the man, Johnson, was brought to the hospital, and found to be dead. On the 3rd, by the coroner's order, a post-mortem examination was made by me, at which there were present Dr. Little, honorary surgeon, and Mr. Gordon and Mr. Dixon, the two other house-surgeons. The examination occupied three hours, and every organ and every cavity was carefully examined. All those who were present were quite agreed as to the condition of the organs described below. What we found amounted briefly to this: Externally, several cuts and bruises about the head and face; internally, congestion of all the organs, considerable atheroma of the aorta, and nothing else. On Monday, the 5th, about 10 P.M., Dr. Whitford, called and said he had been engaged by the defence, and would like to see the body. Accordingly an appointment was made for eleven o'clock the next morning, the 6th. Dr. Whitford was not punctual, and before he arrived I had left for the coroner's court. However, he was shown the body by one of the other house-surgeons, and he made a hasty examination of the organs and the external injuries, the whole process occupying not longer than twenty minutes. The coroner's inquest was held the same day. The evidence of the witnesses was this: That one of the prisoners first engaged in an altercation with Johnson, and then the other two came to the assistance of the first; that Johnson was struck violently on the head several times with the buckle of a belt, and afterwards with a ginger-beer bottle, and that he died in a few minutes after receiving these injuries. After hearing this evidence I gave it as my opinion that the probable cause of death was concussion of the brain, and that the congestion of *all* the internal organs was due to his mode of death. Dr. Whitford then got into the box, and, without any previous communication with me, stated that he took a wholly different view of the matter; "that there was extensive and long-standing disease of the heart"; "that the left lung was *nearly entirely semi-solid*." When asked by the coroner to state the cause of death, Dr. Whitford replied, "I should find that difficult after all the examinations I have made, for none of the wounds I have found left sufficient traces of being enough to cause death. The deceased was much enfeebled by the condition of his lungs." The jury returned a verdict of "Wilful murder." In subsequent conversation with Dr. Whitford, I pointed out to him that the heart and the aorta were not quite the same, and I believe we agreed that the heart and its valves were healthy, but that there was considerable atheroma of the aorta. At the assizes Dr. Whitford described the left lung as "completely solid," and the right as "semi-solid." The jury without the least hesitation returned a verdict of "Manslaughter" against all the prisoners. On the next day Dr. Commins, addressing the Court in mitigation of sentence, was stating that the condition of the deceased man's lungs must have enfeebled him greatly, when he was interrupted by the Judge, who intimated that it was useless for counsel to pursue that argument, as the Court believed that the congestion of the organs was consequent on the assault.

To the questions asked in your article, I reply—1st. The congestion of the lungs was not greater than the congestion of the kidneys, and some of the other organs (which Dr.

Whitford omitted to mention), and was the same in kind and degree as that which is frequently found in persons who have died a violent death. 2nd. There was no consolidation in either lung. 3rd. The aortic degeneration was not more than might have been expected in a man of deceased's age and mode of life. 4th. This last question Dr. Whitford answered at the assizes. He was asked, "If deceased had not *received* these injuries how long would he have lived?" He replied, "He might have lived a week;" but as far as I can see there was no reason why he should not have lived for years. That the pathological changes found in the body had no apparent effect on the man's previous health may be assumed from the fact that he was considered by his wife to be a perfectly healthy man; and there can be no doubt whatever that he died from the effects of the brutal assault which was committed on him. For this assault there was no defence.—I am, Sir, yours faithfully,

F. KNIGHT, M.B. Lond.,
House-Surgeon, Royal Southern Hospital.

Liverpool, Feb. 29th, 1885.

MR. LEAKE AND THE ANTI-VACCINATIONISTS.

To the Editor of THE LANCET.

SIR,—I trust that you will permit me, in the public interest, as well as on professional grounds, to state what I know of the revaccination cases referred to by Mr. Leake. As the subject has now become public property, there cannot, I presume, be any reasonable objection to the exact circumstances being calmly narrated from the medical standpoint. On May 17th, 1881, eight members of Mr. Leake's household were revaccinated by me, six on the 18th, and four, including Mr. Leake himself, on the 22nd. All were then residing in a large roomy house in Hill-street, Berkeley-square, taken for the season; as to its sanitary state I have no information. Two of Mr. Leake's relatives residing in an adjoining street were "done" on the 18th, and their maid on the 22nd. To be exact, therefore, the operations numbered twenty-one, and, if I recollect rightly, at least one of the servants was, properly speaking, vaccinated. It was understood between Mr. Leake and myself that Brussels calf lymph was to be used, and I personally obtained the necessary supplies fresh as they were needed, in tubes, from Dr. Warlomont's agent in town. The operations were done by cross-scratching three places, at the usual distance apart from each other, over the deltoid, with the point of a clean Spratt's vaccinator; in one child, who did not look so strong as the rest, the lymph was applied in two places only. In short, every care and precaution was taken to ensure success.

On visiting the patients on May 23rd, 24th, 25th, and 26th, I found everything going on so well that I did not consider it necessary to call next day; but I left word that, if required, I was to be sent for at once. On the evening of the 27th my immediate attendance was requested. I found one of the servants, whom I had revaccinated on the 22nd, ill in bed. She had complained in the morning, but the housekeeper did not report the illness until shortly before my arrival. The quickened pulse, high temperature, sore-throat, and as yet faint blush on the front of the chest, could not, and did not, fail to arouse suspicion; but I declined to express a final opinion till next morning. As there was then no longer any doubt that we had scarlatina to deal with, not a minute was lost. The patient was quickly carried out of the house into the ambulance, which the London Fever Hospital sent at once in response to Mr. Leake's telegram. The bedclothes, &c., were bundled up and cast out of the top back bedroom window into the garden, and finally removed through the stable; sulphur was burnt for hours in the bedroom; and either carbolic acid or Condy's fluid was thrown down the waterclosets and sinks. Nothing was left undone to prevent the extension of the outbreak, and we were happily successful. Now began our anxieties as to the possible consequences that might follow the importation of scarlatina—how we knew not—into a household passing, hitherto normally, through the vaccinal process. Unfortunately, on June 1st, or thereabouts, one of the daughters, aged about sixteen years, fell ill, the arm became reddish and swollen, and gradually the vesicles broke down into deep ulcerated sores discharging unhealthy pus. She was taken home to near Manchester on the 7th, and her medical attendant there informed me in his letter of the 13th that a large abscess having a threatening aspect for a time formed in the axilla attended with erysipelas. There my information ends. I am under the impression that in another daughter the revaccination was a failure, owing to the vesicles running an irregular course, but after this lapse of time I am obliged to speak with some reserve. To the best of my knowledge and belief these two were the only patients out of twenty-one operated upon in whom the process, where it "took," did not pass through the normal phases. A third daughter accidentally made a very small puncture into the skin in front of the knee with the point of a pair of scissors. At that spot cutaneous erysipelas appeared, spreading downwards to the ends of the toes, and then upwards to the groin, where it stopped. This attack had no connexion whatever with the vaccinal puncture on the arm, which was unaffected. My last visit was on June 22nd.

If any of your readers have had a similar experience to the above, I hope they will make it known in your columns. My own opinion at the time, as stated to Mr. Leake, was that the untoward results just described could not, in fairness, be wholly, if at all, imputed to the lymph or the operation, but that the scarlatina had a good deal to answer for, and might have had more. The rule not to vaccinate in a house where scarlatina is known to prevail implies that scarlatina is hostile to vaccinia. There were no other cases of this disease at the time in the neighbourhood, to my knowledge.

As to the cost, my charges were ten guineas for twenty-one revaccinations, and four guineas for four visits—that is, fourteen guineas. The visits subsequently made to the scarlatina patient and to the children numbered thirty-seven, which at one guinea each brought my claim up to fifty-one guineas; but I do not see how the revaccinations can be debited with more than fourteen. In order to err on the side of moderation I made no extra charge when I had to attend a good many times on two or more patients at the same visit. Mr. Leake's error seems to me to consist in the fact that he lays all the blame on the revaccination, and no blame at all on the scarlatina.

I am, Sir, yours obediently,

Hertford-street, Mayfair, March, 1885. GEO. MOORE, M.D.

RECOVERY AFTER APPARENTLY FATAL CHLOROFORM NARCOSIS.

To the Editor of THE LANCET.

SIR,—Perhaps you may think the following instance of recovery from apparently complete death from chloroform worthy of insertion.

Some two years ago I was asked by a friend to remove a cataract from the eye of a favourite fox-terrier, the request being made with many apologies. I replied that I was as willing to give relief to the dog as to a human being, so the dog was brought. I found that it had necrosis of the central half of the cornea; so having chloroformed it, I made several incisions round the periphery of the necrosed portion. When I had finished, the dog was to all outward manifestation quite dead. My friend, Mr. W. O. Pughe, employed artificial respiration vigorously, but to no purpose. Suspending the animal by the heels had no better result. Artificial respiration was again tried, but still without avail. We next tried nitrite of amyl, but there was no response. All this had taken some time, and the case seemed hopeless, when it occurred to me to employ both artificial respiration and nitrite of amyl together. Two or three compulsory breathings of the amyl caused the dog to jump up and stagger about the room most actively. The eye recovered with scarcely an opalescence to mark the site of the necrosis. Since that time I have never knowingly given chloroform or had it given for me without having amyl nitrite at hand, although I am happy to say it has never been so imperatively necessary to use it as in the foregoing case.

I have seen only one case of chloroform death, and that occurred before the action of amyl nitrite was generally known; but I believe that had we treated the patient then as we treated the dog death would not have resulted. Now that ether has been used so much, is it not time to take stock to see whether it be so much safer than chloroform? My contention is that in the production of complete anæsthesia there is little or no difference between the two drugs, whilst in the after-effects, especially as regards vomiting, nausea, and depression of spirits, chloroform is much superior to ether.

I am, Sir, yours truly,

Liverpool, Feb. 22nd, 1885. GEORGE E. WALKER, F.R.C.S.

"INTEMPERATE ADVOCACY OF TEMPERANCE."

To the Editor of THE LANCET.

SIR,—I observe in your issue of the 21st of last month that you make some severe strictures on a speech I am supposed to have made somewhere and somewhen. You accuse me of making three assertions, which are in effect—(1) That medical men prescribe alcohol to increase their practices; (2) that under no possible circumstances ought it to be used; (3) that increasing death-rate is the gauge of our retrogression in drunkenness. I am surprised that you credit any member of the profession with making such absurd and silly statements without proper inquiry. I have before me a report of a speech in the *Weymouth, Portland, and Dorchester Telegram*, to which I suppose your remarks refer, and, though it is difficult for me to recognise my own speech, so imperfectly are the medical points stated, I defy anyone to find the slightest foundation for supposing I hold such opinions or have given expression to them. I did not go beyond what several medical men of great eminence have stated on the question. While holding most strongly the opinion that healthy persons do not need stimulants, I think in some cases it may prove valuable as a medicine, though it is not required even here so frequently as is generally supposed. I am, Sir, your obedient servant,

Southampton, March 2nd, 1885. JOHN H. ALDRIDGE.

*** Dr. Aldridge has misunderstood the extent of our reference to his lecture. We attributed to him only the third of the above assertions, and that on the authority of a report in a daily paper. His letter shows that in the main his theory of the use of alcohol is identical with our own.—ED. L.

MANCHESTER.

(*From our own Correspondent.*)

PROVIDENT DISPENSARIES.

AT the annual meeting of the provident dispensaries a report was presented which was considered by the committee to be of a very satisfactory character. Practically, they are now self-supporting; four out of the nine branches are making an annual profit on their work. The total subscriptions from members amounted to £3400, of which sum £1865 was paid to the medical staff, not including fees for confinements. One of the chief objects the Society has in view is to prevent abuse of medical charity whilst promoting the independence of the working classes in obtaining medical relief in time of sickness. Investigations are made into the means and position of applicants for relief at the various hospitals in the city, and the general result of this action has been to cause a large diminution in the number of those applying for gratuitous advice who are in a position to pay something for the same. Thus, at the Royal Infirmary the applicants found able to pay during the past year were 12 per cent., against 17 per cent. in 1878. Ten years ago more than 40 per cent. of the cases applying at our charities were found not to be fit objects of charity, whilst last year the percentage was only 14·9. This cannot but be regarded as a satisfactory result, if among this army of would-be medical paupers none truly deserving have been included. The charges at one time made by some members of the medical profession, that patients were allowed to become members of a dispensary who were really in a position to pay the ordinary fees of a medical man, have been of late but little heard, so that it may be assumed that this fairly legitimate complaint has been looked into and remedied.

MANCHESTER MEDICAL CHARITIES.

We have lately had rather an animated discussion going on in the daily papers in relation to the New Eye Hospital. It was at first intended on the completion of the new building to remove entirely the work of the hospital from the centre of the city, where it has hitherto been located, to the new hospital in Oxford-road, situated some mile and a half from the present site. This has led to a scheme being proposed for establishing another eye hospital near the old situation to provide for emergencies, and for the convenience of out-patients who live on the eastern side of the town and in Salford. As a result it seems that the present hospital authorities have decided to retain a portion of the old building in Piccadilly-street to meet these requirements, and thus render the new institution unnecessary. It would certainly be a pity to still further multiply our now too numerous medical charities, most of them being constantly in difficulties to make their income balance their expenditure; the Lock, the Ear, the Children's, the Clinical Hospitals are all asking for increased subscriptions unless the work is to be curtailed. At the annual meeting of the last named, presided over by the Bishop of Manchester, it was advocated by some that wards for private patients should be tried as an experiment for those willing to pay; the experience gained, however, at the Children's Hospital, Pendlebury, does not give much encouragement to this proposal. At the first annual meeting of the newly-established Victoria Dental Hospital the financial statement showed that there was a balance in hand on the year's work of £226, and now that it has issued an annual report and an audit of its accounts it will be eligible for a grant from the Hospital Sunday and Saturday Funds. The amounts collected this year for these two funds combined was, up to the 28th ult., £7224, being £4665 for the Hospital Sunday and £2559 for the Saturday Fund. These amounts show a little falling off from last year; but there will be a few more sums yet to come in. Unfortunately, Hospital Sunday this year was a very wet day, and that may have influenced the result. It has been pointed out that our Saturday collection does not equal that of other similar populations, and that if it were made in a more systematic or revised manner the returns from this source might be considerably augmented.

THE MEDICO-ETHICAL SOCIETY.

At the last meeting of the above Society the newly-elected President, Mr. Walmsley, gave a short address on the present and future position of the Society, and in his remarks alluded to many matters which he thought might fairly claim attention. A somewhat animated discussion ensued, bearing especially on the illegitimate practice of medicine by unqualified men, and the unprofessional conduct of legally qualified men in connexion with the same. This evil would appear to be on the increase, and it was resolved that the special attention of the committee be directed to that subject during the ensuing year. Another matter set down also for early consideration was the relation of medical men in regard to coroner's inquests, more particularly the conducting of post-mortem examinations.

THE SALFORD GUARDIANS AND THE MEDICAL STAFF OF THE NEW HOSPITAL.

The new hospital at Hope belonging to the Salford Guardians has been rather prominently before the public of late; some of the members of that board have been bringing forward rather serious charges against the medical administration. First, it was stated that at some Christmas festivities held there patients were neglected while these were proceeding, and that they were prolonged too far into the night; and a resolution has been passed by which such festivities in the future will be very much curtailed. Still more recently, on the application of some of the members of the same board, a Local Government Board inquiry has been held to inquire into certain allegations made against the medical superintendent; but, so far as appeared from the published reports of the inquiry, the charges were not of a very serious character. The decision of the Local Government Board has not yet been received. Last week an animated discussion took place as to the administration of alcoholic stimulants by the medical staff, some of the guardians wishing to go so far as to prohibit their use altogether, until it was pointed out that they would be exceeding their powers to endeavour to carry into effect any such resolution.

Dr. William Roberts is at present delivering a weekly series of lectures, at Owens College, upon "Dyspepsia and Dietetics," which are open to all members of the profession, and to students in the medical department. They have been very numerously attended. As they will, in all probability, be published at their conclusion, further notice of them in these columns is unnecessary.

Dr. Morrison Watson, who was seized with an apoplectic attack at the College three weeks ago, has so far recovered as to permit of his removal to a private nursing institution, but his condition is still one of exceeding gravity.

Manchester, March 3rd.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NORTHERN COUNTIES CHEST HOSPITAL.

THE annual meeting of this institution was held last week, the Mayor of Newcastle presiding. The report showed that of 541 out-patients under treatment during the past year 143 had been cured and 387 relieved. Of the 22 in-patients, 1 was cured, 19 were relieved, and 2 died. The financial condition of the hospital was shown to be satisfactory, but the committee in the present state of trade could not venture on any extension of the premises, though very desirable, as it would involve an expenditure not covered by the present income.

NEWCASTLE CLINICAL SOCIETY.

The Newcastle Clinical Society gave its second annual banquet at the Central Station last week. Nearly forty sat down to a well-spread table, and the proceedings altogether were very spirited and harmonious. Dr. Mearns of Gateshead presided, and he was awarded well-deserved encomiums as ruler of the feast. Dr. Napier (Dunbar) and others made capital speeches.

TYNE PORT SANITARY AUTHORITY.

Some interesting statistics are afforded in the report of the Tyne Sanitary Authority for the past year. The number of ships during the year was 12,078, of which 9505 were British. The sanitary condition of 9425 of these was good, of 2152 "passable," of 501 defective. The total number of crews visited by the inspectors was 135,938, and of passengers, a large proportion of whom were emigrants, 9468. The measures taken by the authority to suppress the smoke nuisance on the river had brought about some improvement. The medical officer (Mr. H. E. Armstrong) stated that there had been a decrease of patients admitted to the floating hospital during the year as compared with 1883. It was decided at the same meeting to adopt the plan submitted by the city engineer for a new floating hospital on pontoons, in preference to the conversion of an old war-ship, which, even if the vessel were got without price, would involve an expenditure of at least £2000.

NEWCASTLE HOSPITAL FOR CHILDREN.

The annual meeting of the governors of the Hospital for Sick Children was held last week, under the presidency of Sir W. G. Armstrong. The number of in-patients—156 new cases—was stated to have been the largest on record; but there has been a slight decrease in the number of attendances of out-patients, which was still very large, representing no less than 6275 separate attendances on the physicians and surgeons. A vote of condolence with Dr. William Murray, consulting physician to the hospital, and who has been intimately connected with it since its commencement, on the great domestic affliction he has lately sustained by the death of his wife, was unanimously carried. The question of providing a convalescent institution was again brought forward for consideration, and may be said to have advanced a step; for, on the suggestion of Sir W. Armstrong, it was referred to a committee to report upon.

EPIDEMIC OF MEASLES AT SUNDERLAND.

There has been a severe epidemic of measles at Sunderland, causing a marked rise in the death-rate—viz., 37·7 per 1000. Of 91 deaths in the week, 26, all children, were due to measles alone. There were 20 deaths from chest diseases, and many of these cases are supposed to have been unrecognised measles. Mr. Harris, the medical officer of health, has taken very active measures to arrest the spread of the epidemic, in the way of ventilation and disinfection of the public schools.

Mr. Frederick Page, one of the surgeons to the Newcastle-on-Tyne Infirmary, and a lecturer here, has been appointed Assistant Examiner in Clinical Surgery to the University of Edinburgh.

Newcastle-on-Tyne, March 2nd.

THE Corporation of Exeter propose to light the new asylum now in course of erection with the electric light. The building is to accommodate 300 patients.

IRELAND.

(From our own Correspondent.)

QUEEN'S COLLEGES, IRELAND, COMMISSION.

CONSIDERABLE dissatisfaction has arisen in consequence of a solitary newspaper in Ireland having been favoured with a report of the Commission held last year in reference to the condition of the Queen's Colleges in Ireland. The matter has very properly been brought before Parliament, and it has been elicited from the Chief Secretary that the journal in question obtained the information it published from one of the commissioners. It is a strange occurrence that even up to the earlier part of this week the Queen's printer in Dublin could not supply a copy of the report, and the President of the Belfast College recently wrote to ask information as to where he could obtain one, as it so deeply concerned his own institution. The action of the commissioner in question must be regarded as a breach of parliamentary privilege. The report of the majority of the five commissioners—viz., Mr. G. J. Stoney, F.R.S., Professor Jack, LL.D., and Deputy-Surgeon-General Marston, M.D.—is a very elaborate document, covering nearly sixty pages. In addition to the suggestions referred to in last week's issue, these gentlemen recommend the following:—"That, as at present, non-matriculated students shall be admitted to the Colleges. That the matriculation examination programme in arts and law in Cork and Galway be made practically equivalent to that of the Royal University. That the Colleges be permitted to enter students entitled to compete for scholarships in medicine and engineering on a different programme, designed in view of the requirements of those professions. That the Colleges should admit students who have passed the first university examination in arts in the Royal University to compete with their students for the scholarships at the beginning of the second year, subject to the usual conditions of residence. That the senior scholars should be freed from the duty of teaching, which tends to diminish the competition for the scholarships and their practical value. That in Galway medical scholarships shall cease to be awarded in the third and fourth years. That summer classes be instituted in Cork, as in Belfast, for the benefit of medical students. That the distribution of the scholarships be reconsidered with a view to making some difference in the amount payable to the scholars according to their places in the list, and with a view to transferring unawarded arts scholarships to medical students where the number of probable competitors seems to warrant it." As regards the clinical facilities available to the students in medicine, they state that in none of the Colleges are they quite satisfactory. In their judgment they are best in Belfast, very fair in Cork, but certainly inadequate in Galway. In all of them some improvement might be effected. To sum up, the majority of the commissioners state that in their opinion the general standard of education maintained in the Queen's Colleges is in the main satisfactory.

DEATH OF DR. MARCUS EUSTACE.

I record, with regret, the death of this gentleman, which took place at Elmhurst, Glasnevin, on the 1st inst., from cardiac disease. The deceased, who was only fifty-three years of age, was engaged in the treatment of mental affections, and was the proprietor of a private lunatic asylum at Glasnevin near Dublin, and the author of various communications bearing on insanity. Dr. Eustace was a Fellow of the College of Physicians in Ireland, and his decease will be much regretted by a large circle of friends, who esteemed him highly.

THE LABOURERS ACT (IRELAND).

A considerable amount of uncertainty has existed since the passing of this Act as to whether medical officers who had to inspect labourers' dwellings were entitled to extra remuneration for their services. Some time since Dr. Rogers of Youghal sued, at the instance of the Irish Medical Association, the Youghal guardians for a sum of £36 3*s.*, and a verdict in his favour was obtained. The guardians brought the case, however, into the Court of Exchequer, when it was ruled that, as the duties were performed by Dr. Rogers in his capacity of medical officer of health, he was not entitled to recover the fees, with the exception of an outlay for car hire. From this decision a

further appeal was taken, and last week, before the Lord Chancellor and Lord Justices Barry and Fitzgibbon, it was finally decided that the plaintiff was entitled to the sum claimed, inasmuch as the duties for which remuneration was asked had not been assigned to him by the Local Government Board. The appeal was allowed, with full costs.

Dr. F. MacCabe of the Local Government Board has been appointed a Medical Commissioner under the Irish Prisons Board.

Dublin, March 3rd.

PARIS.

(From our Paris Correspondent.)

THE PARIS FACULTY OF MEDICINE.

THE Summer Session of the Paris Faculty of Medicine begins on the 16th inst., and will be continued in the following order:—Medical Natural History, Professor Baillon; Physiology, Professor Béclard; Surgery, Professor Guyon; Medical Jurisprudence, Professor Brouardel; Pharmacology, Professor Regnauld; Pathology and General Therapeutics, Professor Bouchard; Medicine, Professor Damaschino; Experimental and Comparative Pathology, Professor Vulpian; Hygiene, Professor Bouchardat; Materia Medica and Therapeutics, Professor Hayem; Clinical Medicine at the Hôtel Dieu, Professor Germain Sée; Clinical Medicine at La Charité, Professor Hardy; Clinical Medicine at the Hôpital Necker, Professor Potain; Clinical Medicine at La Pitié, Professor Jaccoud; Clinical Surgery at the Hôtel Dieu, Professor Richet; Clinical Surgery at La Pitié, Professor Verneuil; Clinical Surgery at La Charité, Professor Trélat; Clinical Surgery at the Hôpital Necker, Professor Le Fort; Mental Pathology and Diseases of the Encephalon at the Sainte Anne Asylum, Professor Ball; Clinical Diseases of Children at the Hospital for Diseases of Children, Professor Grancher; Syphilitic and Cutaneous Affections at the Hôpital Saint Louis, Professor Fournier; Clinical Diseases of the Nervous System at the Salpêtrière, Professor Charcot; Clinical Ophthalmology at the Hôtel Dieu, Professor Panas; Clinical Obstetrics at the Clinic of the Faculty of Medicine, Professor Pajot. Besides his lectures at the School of Medicine, Professor Brouardel delivers a practical lecture three times a week at the Morgue. In addition to the above lectures, the following is a list of the principal supplementary lectures that will be delivered in the course of the session:—Medical Chemistry: Dr. Hanriot, agrégé. Natural History: Dr. Blanchard, agrégé. Physics: Dr. Gariel, agrégé. Physiology: Dr. Rémy, agrégé. Morbid Anatomy: Dr. Straus, agrégé, who will lecture on the Anatomical Lesions determined by Microbes, the Morbid Anatomy of the principal Infectious Diseases, &c. Practical lectures, with demonstrations and experiments, will also be delivered on Chemistry, by Dr. Hanriot; Physics, by Dr. Guébhard; Physiology, by Dr. Laborde; Histology, by Dr. Cadiat; Operative Surgery, by Dr. Farabeuf.

PRIZES AT THE ACADEMY OF SCIENCES.

At the annual meeting of the Academy of Sciences, which was held last week, the following prizes for the year 1884 were announced, but I give only those concerning medicine and its collateral branches:—M. Alfred Durand-Claye, for his work on the Epidemic of Typhoid Fever in 1882. Honourable mention was accorded to M. Chervin for his memoir on the Medical Geography of the Seine-Inférieure. The Prix Montyon was divided among three candidates, 2500 francs being awarded to each: the first to M. Testut for his treatise on Muscular Anomalies in Man explained by Comparative Anatomy; the second to M. Cadet de Gassicourt for his clinical treatise on Diseases of Children; the third to M. Leloir for a series of memoirs on Cutaneous Affections. The Prix Godard was awarded to M. Tourneur for his researches on Embryonic and Fœtal Anatomy. The Prix Serres was divided between Dr. Cadiat for his treatise on General Anatomy applied to Medicine, and M. Kowalevsky for his works on Embryogeny. The Prix Sallemann was awarded to Professor Brown-Séquard for his series of works on Inhibition and Dynamogeny. Another portion of the Prix Montyon was divided between MM. Jolyet and Laffont for their researches on the Vaso-dilator Nerves. The Prix Ponti was awarded to M. Joseph Boussingault for his work on Fermentation.

Paris, March 3rd.

VIENNA.

(From our own Correspondent.)

TUBERCULOSIS IN VIENNA.

WHILST through the salutary influence of the "Hochquellen" aqueduct, which supplies Vienna with drinkable water from the Styrian Alps, the cases of diseases of the stomach and of the intestine have considerably diminished and cases of typhus have become rare, the number of phthisical persons increases every year. The number of people who yearly die in Vienna from phthisis pulmonalis is not less than 5000, and according to the last report of the Vienna "Allgemeines Krankenhaus" in this hospital alone 18,096 patients suffering from pulmonary diseases sought relief during the last decennium, of whom 10,172, that is 56·2 per cent., died. Doubtless the dust of our granite pavement is the cause of much pulmonary disease, but certainly other social circumstances contribute largely to the spread of the affection. The Austrian Home Minister recently instructed the authorities of the various hospitals to take into consideration the advisability of separating patients suffering from phthisis pulmonalis from the other patients, and to adopt any other precautionary measures which might be deemed necessary. The answers have not yet been returned.

VAGUS PNEUMONIA.

The changes in the lungs caused by cutting through the vagus nerves have formed since the time of Valsalva the subject of very deep research. All animals whose vagi have been divided in the throat perish sooner or later. Most of them die of broncho-pneumonia. Traube is of opinion that this vagus pneumonia is caused by the penetration of mucus and of food-matters into the trachea. Schiff, however, gave the following explanation: The vagus is the nerve which supplies the muscles of the vessels of the lung; if it is severed, paralysis of the muscles with hyperæmia and inflammation occur. In order to decide the controversy, only the branches of the vagus which proceed to the lungs should be cut through, whereas the recurrent laryngeal nerves must remain intact. Dr. Gärtner and Dr. Amrüs have, in Professor Stricker's laboratory, cut through the vagus below the recurrents after two methods. According to the first, they divide the recurrent laryngeal in the neck, and connect it with the vagus at the throat, where it heals up, after which they cut through the vagus below this spot. A dog which was thus operated on on both sides died after sixteen days, and showed no broncho-pneumonia at the autopsy. The second method is more exact. The pleural cavity is opened, and then resection of the vagus is performed under antiseptic precautions. The branches proceeding to the heart and to the larynx remain intact, and only those branches are divided which supply the lung and stomach. A dog in which, on the thirtieth day after the operation, a gastric fistula was produced, perished on the forty-sixth day, obviously owing to the latter operation. At the autopsy no pneumonia could be detected; the lungs were pale, without the slightest infiltration. Consequently the question of vagus pneumonia is definitively settled according to the views of Traube.

A CORN-GRAIN IN THE MUSCLE OF THE HEART.

Dupuytren and Balch relate cases in which bullets have remained embedded during several years in the substance of the right side of the heart without producing obvious disturbance. Carnocha has also reported a similar instance affecting the ventricular septum. The following case will, however, be found none the less worthy of interest. On Nov. 19th of the past year, a locksmith, aged thirty-four, happened to discharge a gun loaded with hail-shot against the left side of his thorax. He walked without any support to the hospital, distant an English mile. The hail-shot entered about one centimetre below and one centimetre and a half to the inner side of the nipple. The patient coughed and spat blood. The left side showed dulness as far as the middle of the scapula. On the next day dulness of the entire left side of the thorax was noted, which was referred to hæmothorax. After the lapse of seven days pleuritis supervened, and twenty-one days after the accident the thorax was punctured owing to urgent dyspnœa,

when 500 centimetres of a bloody liquid were discharged. After another seven days thoracentesis had to be performed, as the dyspnœa had become very urgent, when two litres of dark putrefying blood were discharged. Into the pleural cavity about two tablespoonfuls of a thin emulsion of iodoform were poured; a drainage-tube was inserted, bandages applied, and the wound healed well. At the beginning of January symptoms of Bright's disease were remarked, from which the patient died on Jan. 19th. At the autopsy an opening corresponding to the left ventricle, with pigmented borders, was found in the pericardium, and in the substance of the right chamber of the heart a grain of corn was embedded. Professor von Mosetig, in whose division this case occurred, stated that the substance of the heart showed no obvious change.

GASTRIC ULCER ASSOCIATED WITH DIPHTHERIA OF THE STOMACH.

Professor Kundrat exhibited in the last sitting but one of the I. a. R. Society of Physicians a rare preparation of an enormously dilated stomach, on the back and partially on the front wall of which, near the pylorus, an ulcer existed as large as the palm of the hand, the borders of which were of a spiral shape, and the whole of which was typical; the surrounding parts were discoloured and diphtheritic. The pylorus was lying sideways and narrowed in the form of a semilunar slit, the scarred retraction of the ulcer having dragged it towards the middle, whereby the antrum pyloricum was pushed forwards and the dilatation of the stomach continually increased. In consequence of the abnormal position of the pylorus, the symptoms of the stenosis multiplied. A diphtheritic condition of the mucous membrane of the stomach, which has been repeatedly observed in cases of diphtheria of the throat, even without involving the œsophagus, is a rare complication. Professor von Bamberger, at whose clinic the case in question occurred, stated that the decrepit patient, though only forty-four years of age, suffered for four years from severe indigestion and constipation. Vomiting took place, but no hæmatemesis. Blood-corpuscles could not be found in the vomited matters, whereas the Teichmann crystals could be distinctly seen. Free muriatic acid was lacking in the contents of the stomach, in spite of Van der Velden's and Riegel's statement that this want of muriatic acid is a sure symptom of carcinoma. The patient died of internal hæmorrhage.

OPERATION FOR TUMOUR OF THE BLADDER.

Sir H. Thompson, in his work on Tumours of the Bladder, has recommended perineal section to be made for the purpose of digital exploration of the bladder in cases of cystitis, in various kinds of cystodynia the cause of which cannot be found otherwise, and in cases of hæmaturia vesicalis of unknown origin. Herr Dr. Hofmockl adopted this method in the case of a very decrepit man, who showed strong symptoms of anæmia, and who had suffered for three years from hæmorrhage from the bladder, and, when the coagula prevented the flow from the urethra, also from ischuria. Dr. Hofmockl first found, by means of the catheter, a floating body on the right side of the bladder, which he believed to be a tumour of that viscus. By the performance of perineal section he succeeded in extracting a villous mass, which was connected with the bladder by a pedicle, and which proved to be a papilloma villosum. The pedicle was nearly wholly removed with the rasp spoon. The bleeding soon ceased. An iodoform bandage, no drainage, and injection with a solution of nitrate of silver (1 in 100) was the treatment adopted. The patient soon after the operation became apyretic, and the urine, which formerly was ammoniacal and cloudy, became of a clear bright yellow; but after the lapse of about three weeks he died of violent bleeding from the rectum, which was caused, according to the necropsy, by an ulcer in the duodenum. The rest of the pedicle could not be found in the bladder. Professor von Dittel states that he prefers, as a rule, to convince himself of the presence of a tumour by means of the Nitze-Leiter's electro-endoscope, and then to perform the supra-pubic operation, although Hofmockl's operation succeeded very well.

THE BACILLUS OF SYPHILIS.

The researches respecting the syphilis bacillus are now finished, and will shortly be published. Dr. Lustgarten attributes real diagnostic value to the proof of the existence of this organism. In sixteen cases of syphilis he succeeded in rendering visible this bacillus by a mode of decolourisation peculiar to itself. It is very similar to the tubercle bacillus, but always occupies a cell. In cases of sclerosis, gumma, and in the contents of syphilitic ulcers, the same micro-organism was found; in the soft chancre, however, the presence of a bacillus could not be proved.

Vienna, Feb. 13th.

Obituary.

WILLIAM GILLBEE, M.R.C.S.

MR. WILLIAM GILLBEE, one of the oldest practitioners in Melbourne, expired on Jan. 4th, aged sixty years. The deceased was born in Hackney and received his medical education at Edinburgh. In 1848 he became a member of the Royal College of Surgeons of England, and in the following year visited Tasmania and Victoria. Proceeding to California, he for two years lived an adventurous life in the wild gold-fields of that country. Returning to England, he again took ship for Geelong, and at once commenced practice in Melbourne. In the early part of 1854 he was elected surgeon to the Melbourne Hospital, then about one-tenth of its present size. With this institution his professional life was closely identified, and in every movement made to enlarge and improve it he took a very active share. He held the position of honorary surgeon to the institution for twenty-two years, till the election of 1875, when he was not one of the successful candidates. He, however, retained his place in the committee of the hospital, and in 1877 became its vice-president, and in 1882 its president. In 1853 he assisted in the formation of the Medical Society of Victoria, of which, ten years later, he became president. In 1879 he warmly assisted in the formation of the Victorian branch of the British Medical Association, and was elected its first president. In 1872 he was elected by a vote of the whole profession to a seat on the Medical Board of Victoria, and about six years ago he was appointed its president, which office he held at the time of his death. The cause of his death was disease of the lungs, which a visit to England in 1883 had entirely failed to benefit.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At examinations held last week the following gentleman was admitted a Fellow of the College:—

Frederick Heuston, A.M.D.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 26th ult.:—

Arnold, William, Manchester School of Medicine.
Blachford, Jem, London Hospital.
Cundell, William Hatch, St. Mary's Hospital.
Hebblethwaite, Septimus Montague, St. Bartholomew's Hospital.
Innes, Charles Barclay, St. Bartholomew's Hospital.
Sutton, James Bryan, Charing-cross Hospital.

DR. T. J. MACLAGAN has been elected a member of the Royal Institution.

PNEUMONIA has lately been unusually prevalent and fatal in New York.

QUARANTINE is now imposed at Alexandria on all arrivals from Bombay and Madras.

A TELEGRAM from Paris states that the Ecole Normale has been closed on account of several cases of typhoid fever.

AT the annual festival of the Earlswood Asylum for Idiots held on the 3rd inst., subscriptions to the amount of £1518 were announced.

RIVER POLLUTION.—A deputation from the National Society to Secure Effective Legislation against River Pollution waited upon the Lord Mayor on the 3rd inst., and arranged for a public meeting at the Mansion House, under his lordship's presidency, at an early date.

TYPHUS FEVER is reported to be rife at Kieff, which is at present crowded by persons attending the fair for negotiating beetroot contracts.

THE Home for Incurables at Aubert-park, Highbury, which has been erected at a cost of £4000, and is intended to accommodate forty patients, was opened on the 4th inst.

THE tender of £74,571 submitted by Messrs. Kirk and Randall, for the erection of a new infirmary at Championhill, has been accepted by the guardians of the St. Saviour's Union.

DR. W. O. THRAILKILL of San Francisco communicates to a recent number of the *Philadelphia Medical World* the discovery at Point Sal in Santa Barbara county of a male and female petrifaction.

THE Gillingham (Kent) Local Board have at length decided to erect an infectious disease hospital for the parish, and are advertising for two or three acres of land for that purpose.

THE workhouse and infirmary in connexion with St. George's-in-the-East Union are about to be enlarged, at a cost of £9000. Messrs. Wilson, Son, and Aldwinckle are the architects.

VACCINATION GRANTS.—Mr. J. Payne Massingham of the Wolstanton district, Mr. H. Whiting of Haslemere, Mr. D. Mackintosh of Downham, and Mr. J. Hamilton of Swadlincote, have received Government grants for efficient vaccination.

MR. WILLIAM RUSSELL, of Barnwell, Northampton, has given £5000 to the authorities of the University of St. Andrews to found entrance bursaries in memory of his brother and himself, both having received their education at that university.

THERE is a difference of opinion in Ramsgate about the merits of the corporation drainage scheme, a somewhat noisy meeting having been held for the purpose of opposing it and substituting a plan suggested by Mr. H. J. Johnstone, J.P.

PRESENTATION.—Dr. Henry Tomkins, late resident medical officer of the Monsall Fever Hospital, has been presented with a handsome dressing-case by the nurses and others of the staff of that institution, on his resignation after a tenure of office of more than six years.

THE ASSOCIATION OF PUBLIC SANITARY INSPECTORS.—At the monthly meeting of this Association, to be held to-day (March 7th) at 6 P.M., at 1, Adam-street, Adelphi, an address will be delivered entitled "Disinfectants and their Sanitary Uses," by Dr. John W. Tripe, medical officer of health for the Hackney District.

THE Dover Board of Guardians have increased the salary of Dr. Finn, the surgeon to the workhouse, from £100 to £130, Alderman Dr. Marshall bearing witness from his own knowledge to the efficient manner in which the duties had been carried out. It was stated at the board meeting that the work had increased considerably, and that there were now 113 patients in the workhouse hospital.

MAINTENANCE OF SMALL-POX PATIENTS. — The Woolwich Board of Guardians have sued a man whom they sent with his own consent to the small-pox hospital for 1s. a day. The judge asked to be referred to an Act giving boards of guardians power to recover for maintenance of a patient removed by them to a hospital. As such an Act could not be produced the Board were non-suited.

DRINKING-WATER CONDENSING MACHINERY FOR EGYPT.—The *Calabria*, a telegraph ship chartered by the Admiralty for the Egyptian expedition, is (says the *Engineer*) fitted with the largest installation of condensing machinery ever put in one ship. It is for the purpose of converting sea-water at Suakim into drinking-water for the troops and other persons connected with the expedition. It is capable of condensing 64,000 gallons a day, and is very simple in construction, only occupying a deck space of 21 ft. by 18 in., and weighing 33 cwt. The enormous cable tanks will contain 750 tons of water, and these are supplemented by forty-eight 400-gallon tanks, so that a very large quantity can be sent on shore in boats at once.

HOMES FOR INEBRIATES.—At the recent annual meeting of the Homes for Inebriates Association it was stated that in the Dalrymple Home there had been forty-nine admissions, and of those discharged 50 per cent. were doing well, and 25 per cent. were improved. The majority had been admitted under the provisions of the Habitual Drunkards Act, nine having entered for twelve months each. The sum of £15,000 is solicited for a Home for the Poor.

PROVIDENT SURGICAL APPLIANCE SOCIETY.—At the thirteenth anniversary festival in aid of the funds of this institution held on the 27th ult., it was stated that since its establishment nearly 35,000 persons have been relieved by the Society, which last year treated 4151 cases. The annual expenditure exceeds £1700, of which about £1100 represents the cost of instruments, to which patients contribute £500, the remainder of the funds being supplied by subscriptions and donations, which are much needed.

TESTIMONIAL TO DR. DENHAM, OF DUBLIN.—The fund which has been formed in Dublin for the purpose of presenting Dr. Denham, a well-known obstetric surgeon of that city, with an address and testimonial on the occasion of his retiring from practice, has reached £370, and will shortly be closed. In the meantime any of the pupils or friends of Dr. Denham who wish to subscribe and have their names added to the list should communicate without delay to Dr. Kidd, hon. treasurer, 58, Merrion-square, Dublin.

DEATH OF DR. DAMROSCH.—News has been received from New York of the sudden death from pneumonia and overwork of Dr. Leopold Damrosch, who was born at Posen in 1832, and took his degree as Doctor of Medicine at Berlin University. He afterwards studied music, and became a member of the Weimar orchestra under Liszt. He resided for many years in Breslau, but in 1871 he went to New York, where he organised the Oratorio Society, the Symphony Society, the May Festival, and lastly a season of German opera, which is still in progress.

SEAMEN'S HOSPITAL SOCIETY.—The sixty-fourth annual court of this Society was held on the 4th inst. From the report, which was read and adopted, it appears that the number of patients under treatment in the hospital last year was 1751, and that 7360 out-patients were relieved. The drainage of the hospital has been found to be so radically defective that nothing short of the reconstruction of the whole system can place the hospital in a safe sanitary condition. The estimated cost of the drainage works is £3000, and towards this the Lords Commissioners of the Admiralty have agreed to contribute £1500.

LONDON SANITARY PROTECTION ASSOCIATION.—At the annual meeting of this Association, which was held on the 28th ult. at their offices, 1, Adam-street, Adelphi, Lord Chelmsford (who took the chair in the absence from town of the President, the Duke of Argyll) announced that the number of members was now close upon 1000, having been 887 on Dec. 31st last. This number included about forty medical men who were members in respect of their own private residences. The annual report, which had been circulated, showed that there were now fourteen Associations working in the country on exactly the same principles as the London one, and mustering 2356 members on Dec. 31st; and that in the course of the year the engineers of the London Association had reported upon the sanitary arrangements of four of the smaller London hospitals and one large hospital at Chatham.

THE FOOD AND DRUGS ACT.—A case under this Act was heard recently before the Greenwich magistrate where the secretary to the Seamen's Hospital, who had contracted for a supply of milk with 10 per cent. of cream all the year round, noticing the continued poorness of what was supplied, took a sample, "telling the defendant's man it was for analysis. He divided it into three parts, giving one to the man, keeping another himself, and sending the third to the public analyst." A certificate was handed in which stated that 60 per cent. of cream had been removed, and that there had been about 5 per cent. of water added. The magistrate then asked whether he had explained to the man that he was going to have the sample "analysed by the

public analyst." The prosecutor replied that he had said it would be analyzed. This, his worship decided, was fatal to the case, and dismissed the summons. He refused, however, an application for costs, though the defendant's solicitor stated that he had half a dozen grounds of defence.

MEDICAL SOCIETY OF LONDON.—The following is a list of officers and Council elected for the ensuing session:—President: William Miller Ord, M.D. Vice-Presidents: Richard Douglas Powell, M.D.; Sydney Jones; John Langdon Down, M.D.; Samuel Cartwright. Treasurer: Arthur Edward Durham. Librarian: William Henry Allchin, M.B., F.R.S.E. Honorary Secretaries: James Kingston Fowler, M.D.; John Henry Morgan, M.A. Secretary for Foreign Correspondence: Felix Semon, M.D. Council: Thomas Lauder Brunton, M.D., F.R.S.; Smith Houston Davson, M.D.; Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S.; David W. Finlay, M.D.; Alfred Pearce Gould, M.S.; F. De Havilland Hall, M.D.; Francis Mason; Edmund Owen; Isambard Owen, M.D.; George Richard Turner Phillips; Thomas Pickering Pick; Walter Pye; Joseph Peeke Richards; Arthur Ernest Sansom, M.D.; Charles Brodie Sewell, M.D.; William Heath Strange, M.D.; T. Tillyer Whipham, M.A., M.B.; William Henry White, M.D.; Charles Theodore Williams, M.A., M.D.; Alfred Wiltshire, M.D.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—The corner stone of the new buildings for this institution, now in course of erection in Caxton-street, was formally laid on the 28th ult. by the Duke of Westminster. The building, which is in the Queen Anne style, is 160 ft. long, and is four storeys high. The site on which it stands is next to the Westminster Town-hall, and was acquired at a cost of £4600, while the building and fittings are estimated to amount to £10,000. It has been erected for the purpose of relieving the hospital, where the medical school has heretofore been carried on, and the space thus left vacant in the former will be utilised for extending the present out-patient accommodation. The new school will give room for the attendance of about 200 students, and is provided with all the necessary class-rooms, laboratories, and lecture-rooms, besides a refreshment and recreation department, and an extensive specimen museum. It is anticipated that the school, which is being constructed in red brick, with red Corshill stone facings, will be ready for use in October next.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BADDELEY, CHARLES EDWARD, M.B.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the First District and Workhouse of the Newport (Salop) Union, vice Thomson, resigned.

BUXTON, A. ST. CLAIR, F.R.C.S., has been appointed Assistant-Surgeon to the Western Ophthalmic Hospital.

DAVIES, EDWARD, M.D. St. And., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the No. 3 Wrexham Rural Sanitary District.

FOX, W. PERCY, L.R.C.P. &c., has been appointed Assistant Medical Officer to the Brownlow-hill Infirmary, Liverpool, vice J. Henderson Brannigan, resigned.

GABB, J. PERCY A., M.D.Lond., has been appointed Honorary Assistant Medical Officer to the Royal Surrey County Hospital, Guildford, vice H. Parson, resigned.

HARDORD, EDW. AUGUSTUS, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the First District of the Newcastle-on-Tyne Union, vice Scotland.

JONES, WILLIAM, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Ruabon District of the Wrexham Union.

LAPAGE, CHAS. CLEMENT, M.A., M.D.Cantab., has been appointed Physician to the Nantwich Brine and Medicinal Baths Company.

LEACH, ALFRED, L.R.C.S.E., L.S.A.Lond., has been appointed Attending Medical Officer and Accoucheur to the Provident Medical Institution and Free Dispensary, Pimlico-road, S.W., vice Arthur Graham, retired.

MORGAN, THOMAS W. LUVELL, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for No. 3 District of the Newport (Salop) Union, vice Baddeley.

OLDHAM, H. FALCONER, B.A., M.B., B.Ch. Trin. Coll. Dub., Resident Medical Officer to the Netherfield Institution for Infectious Diseases, Liverpool, has been appointed Resident Medical Officer to the Monsall Fever Hospital, in connexion with the Royal Infirmary, Manchester, vice H. Tomkins, M.D., resigned.

PALM, THEODORE A., M.D., C.M.Ed., has been appointed Medical Officer for the Thorncombe District of the Axminster Union, vice Wills, deceased.

PERKS, Dr. ROBERT HOWELL, F.R.C.S.E., has been appointed Resident Medical Officer to the Royal Albert Hospital, Devonport.

STEPHENS, WILLIAM J., L.R.C.P.Ed., has been appointed Honorary Physician to the Brighton and Hove Dispensary, vice E. G. Whittle, M.D.Lond., resigned.

STEVENS, ARTHUR FREDERICK, M.R.C.S., has been appointed Medical Officer for the First District of the Thingoe Union, vice Masters, resigned.

THOMSON, T. P., M.B. & C.M., has been appointed Medical Officer and Public Vaccinator for the Alberbury District of the Atcham Union, vice Lawson, M.R.C.S., resigned.

WATSON, ARCHIBALD, M.D., F.R.C.S., has been appointed Professor of Anatomy in the Adelaide University.

WEST, WILLIAM AUGUSTUS, L.K.Q.C.P.I., L.R.C.S.I., has been appointed District Surgeon of the Sydney Hospital.

WHITE, JOHN WILLIAM, L.K.Q.C.P.I., L.F.P.S.Glas., M.R.C.S., has been appointed Medical Officer for the Fifth District of the Bedminster Union, vice Cory, resigned.

WOOLERTON, EDWIN GOODBURN, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Wendover District of the Wycombe Union, vice Odling, resigned.

Births, Marriages, and Deaths.

BIRTHS.

HEPBURN.—On the 23rd ult., at 3, Bridge-road, Hammersmith, W., the wife of John Hepburn, L.R.C.P. &c., of a daughter.

JULER.—On the 2nd inst., at Wimpole-street, Cavendish-square, W., the wife of Henry Juler, F.R.C.S., of a daughter.

MICHAEL.—On the 1st inst., at Turnchapel, Plymouth, the wife of Surgeon H. J. Michael, Medical Staff, of a daughter.

WEST.—On the 24th ult., at Wimpole-street, Cavendish-square, W., the wife of Dr. Samuel West, of a daughter.

MARRIAGES.

CAMERON—SAVORY.—On the 3rd inst., at Stephen's Church, Westbourne-park, Robert Duncan Cameron, L.R.C.P. & L.R.C.S., of North Cave, Brough, Yorkshire, second son of Donald Cameron, LL.D., M.A., of Torquay, to Grace, daughter of the late William Savory, Esq., of Painswick, Gloucestershire.

CROOKSHANK—COLFOX.—On the 26th ult., at Bridport, Dorset, Edgar March Crookshank, M.B.Lond., youngest son of the late Captain Chichester Crookshank, 51st Foot (King's Own), to Harriet, only child of Thomas Colfox, Esq., J.P., of Rax House, Bradpole, Dorset.

CURD—DOYLE.—On the 26th ult., at St. Paul's, Camden-square, Charles Curd, M.R.C.S., of Bath, to Charlotte Emily, second daughter of Watkin Doyle, of Camden-road, N.W.

GILKES—DUNN.—On the 25th ult., at St. Augustine's, Highbury New-park, Norton Gilbert Gilkes, M.R.C.S., of Walthamstow, to Catherine Mabel, elder daughter of the late George Dunn, M.R.C.S., of Hales Owen, Worcestershire.

DEATHS.

BROWNE.—On the 2nd inst., at Crindan, Dumfries, W. A. F. Browne, M.D., LL.D., F.R.C.S.E., late Her Majesty's Commissioner in Lunacy for Scotland, in his 79th year.

GELL.—On the 29th December, 1884, at Thornborough, Queensland, suddenly, of apoplexy, Thomas Silvester Gell, M.D.Edin. (1870), M.B. & C.M. (1866), M.R.C.S.Eng. & L.S.A. (1866) Univ. Edin., late of St. John's Lodge, Kensal-green, aged 40.

HALPIN.—On the 27th ult., at Arklow, county Wicklow, Stopford W. Halpin, F.R.C.S.Eng. &c., aged 61.

HOPKINS.—On the 1st inst., after a long and painful illness, borne most patiently, at 93, Camberwell-road, Camberwell, S.E. (the residence of his brother, Dr. John Hopkins), Rees Hopkins, L.R.C.P., M.R.C.S.E., L.S.A.Lond., L.M., & M.R.C.V.S.Eng., of The Ash Grove, Pontypridd, Glamorganshire, in his 40th year.

HOWARD.—On the 28th ult., at his residence, New Buckenham, Norfolk, Horace Fulcher Howard, Esq., M.R.C.S.Eng. &c., in his 50th year.

SHILLITOE.—On the 1st inst., Richard Rickman Shillitoe, F.R.C.S., of Hitchin, aged 69.

WILLING.—On the 2nd inst., at Wood-green, George Frederick Brutton Willing, L.R.C.P., M.R.C.S., L.M., aged 64.

WOOD.—On the 1st inst., at his residence, Franklin House, South Norwood-hill, Surgeon-Major William Edward Wood, late of Her Majesty's Indian Army, aged 68.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, March 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. each day, and at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Macpherson: History of the Use of Ipecacuanha in Dysentery.—Dr. Sydney Coupland: A case of Endocarditis.—Dr. Samuel West: Hæmaturia in Granular Kidney.

Tuesday, March 10.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

ROYAL INSTITUTION.—3 P.M. Prof. Gamgee: Digestion and Nutrition.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Hermann Weber: Croonian Lecture on the Hygienic and Climatic Treatment of Consumption.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. James G. Fraser: Certain Burial Customs as Illustrative of the Primitive Theory of the Soul.—Rear-Admiral F. S. Tremlett: The Sculptured Dolmens of the Morbihan.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. F. Treves: The Treatment of Acute Peritonitis by Abdominal Section.—Mr. J. R. Lunn and Dr. Benham: Case of Aneurism of Abdominal Aorta.

Wednesday, March 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department: 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.

HUNTERIAN SOCIETY.—7.30. Council Meeting. Dr. Herman: Cases of Dermoid Pelvic Cysts.—Mr. Corner: Cases of Uterine Hæmorrhage with Impending Death cured by Removal of the Ovaries.

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. General A. C. C. De Renzy: The Prevention of Heat Apoplexy.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. J. W. Stephenson: A New Catadioptric Illuminator.—Dr. J. D. Cox: Structure of the Diatom Shell; Siliceous Films too thin to show a broken edge.—Exhibition of Nobert's Original Machine for Ruling his Lines.—Messrs. J. R. Cheshire and W. W. Cheyne: The Pathogenic History of a New Bacillus.—Mr. F. Fowke: The First Discovery of the Comma Bacillus.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens by Drs. Aveling, Granville Bantock, Bdis, and others.—President's Inaugural Address.—Dr. Aveling: A case of Double Pyosalpinx.

Thursday, March 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: The New Chemistry.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8 P.M. Living Specimens. Mr. Nettleship: Total Detachment of Retina of long standing, with retention of some sight.—Mr. A. S. Morton: Choroidal Atrophy.—Dr. Brailey: The Condition of the Ciliary Nerves in certain Diseases of the Eye.—Dr. Mules: Evisceration of the Globe (with living specimen).—Mr. Nettleship: Note on the Spontaneous Disappearance of Diabetic Cataract.—Mr. A. H. Benson: Tuberculosis of Cornea.—Mr. J. B. Lawford: Case of Tubercle of the Choroid (with ophthalmoscopic drawing and microscopical specimens).

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Hermann Weber: Croonian Lecture on the Hygienic and Climatic Treatment of Consumption.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. A. Wynter Blyth: Household Poisons.

Friday, March 13.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Bastian: A case of Thrombosis of the Basilar Artery, with profound coma, extreme lowering of the rectal temperature, and death in five and a half hours.—Mr. Barwell: An Unusual Sequela of Ovariotomy.—Mr. Davies-Colley: Three cases of Colotomy, with delayed opening of the intestine.

ROYAL INSTITUTION.—9 P.M. Sir F. A. Abel: Accidental Explosions caused by Non-explosive Liquids.

Saturday, March 14.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. C. Armbruster: Richard Wagner.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 5th, 1885.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 27	29·83	S.W.	50	48	...	53	46	·15	Raining
,, 28	29·91	S.W.	47	46	...	54	46	·06	Overcast
Mar. 1	30·19	E.	38	36	...	46	34	·06	Bright
,, 2	30·16	E.	37	36	...	46	33	...	Overcast
,, 3	29·71	S.	42	40	...	47	37	...	Cloudy
,, 4	29·41	W.	45	44	...	55	41	·41	Hazy
,, 5	29·65	S.W.	44	42	...	...	40	...	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

"WHAT CONSTITUTES A QUALIFIED MEDICAL ASSISTANT."

The Birmingham Daily Gazette gives a report, under the above heading, of an action by Mr. Frederick Westwood against Mr. Ashmead to recover a certain sum for alleged services as assistant, over and above £30, received in form of advances, and £18 1s., the amount of a charge by Mr. Ashmead for medical attendance on Westwood. Mr. Ashmead's case was that he took Westwood merely for assistance in bookkeeping and dispensing, on the understanding that the experience gained would be sufficient remuneration to the assistant, whose sole medical qualifications were that he had while in America read a few medical books, the names of which he did not remember. Yet he said that he occasionally visited patients and prescribed for them. The judge thought the sums he had received were sufficient. The serious part of the case is that such persons should be allowed to act as assistants.

C. H. H.—We receive every week letters calling attention to discreditable advertisements similar to the one enclosed. To reproduce them would be to extend the publicity the delinquents desire.

Ajax.—There is nothing to prevent the officer from holding the appointment, providing the duties thereof are duly fulfilled.

Mr. G. Cucall.—Next week.

SCHOOL BOARDS AND MEDICAL CERTIFICATES.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Feb. 28th, 1885, the above subject was brought under notice by a letter from a medical man at Southwark, in which he wrote: "I hold in my possession a letter from the Education Department, Whitehall, ... confirming a statement previously made, that whenever a medical certificate is required by School Boards in explanation of the absence of a child from school, the cost of the certificate should be defrayed by the Boards themselves." In an annotation in the same number I read: "It is pleasant to find the imperious exercise of authority by School Board officials checked by magisterial interference..... If they [the children] are too ill to attend, the School Board would like to get that fact certified by the medical man in attendance, ... This attempt has been checked, we hope effectually, by a recent decision in the Southwark police-court, where the magistrate, Mr. Bridge, dismissed a summons obtained by the School Board and mulcted the Board in costs." Will you tell me, and, I may say, the profession, if you have any reason to alter your opinion on this subject? I hold that a medical man's duty is solely to attend the sick, and I persistently refuse to certify. There is a difference of opinion between me and some members of the Board. I showed the number of your journal to which I have alluded; but that is no authority, in their opinion. I should much like your opinion, and that of others of the profession.—I am, Sir, yours faithfully,

Feb. 26th, 1885. M.R.C.S.E.

*** We adhere to our expressed opinion. When public authorities require professional opinions, they must learn to pay for them.—ED. L.

HISTORY OF SMALL-POX.

X. Y. Z. should read Sydenham, Gregory, and Sir Thomas Watson. As later accounts none are better than the reports of the medical officers of the metropolitan small-pox hospitals, such as one before us by Dr. Gayton, in pamphlet form. In this, 10,403 cases are analysed. It is published by Messrs. McCorquodale, Cardington-street, N.W.

Mr. R. L. Collings.—It is a question of time and means, as well as of ability. As a general rule, the more practicable course at present is to try for a Scotch degree.

X. will find in our present number an answer to his question.

"HYSTERICAL PYREXIA."

To the Editor of THE LANCET.

SIR,—In your last issue I notice an annotation with this title, containing a reference to a communication made by M. Débove to the French Académie de Médecine. For the sake of British clinical medicine, I desire to say that the existence of this hysterical pyrexia is well known in this country, and I am surprised to hear that it should be regarded as a novelty. I should be prepared to give plenty of evidence of its existence, and I consider the occurrence of hyperpyrexia in hysteria by no means uncommon. I send for your inspection the charts, some of them recorded hourly, of the temperature of a girl whom I had under observation for some time. She never presented any sign of organic disease, and certainly was in good health for some time after her discharge, though I have recently lost sight of her.

I am, Sir, yours very truly,

Birmingham, March 3rd, 1885. ROBERT SAUNDBY.

To the Editor of THE LANCET.

SIR,—If you think the following case bears upon your remarks under the above heading in the current number of your journal, it is at your service.

On Saturday last I was called to see a young lady whom I had some months before been treating for mitral disease of rheumatic origin, and who had for some weeks past been in much better health than usual, and not under treatment. The evening before I saw her she was reported to have been remarkably well, and had been for a rather long walk. When seen by me she was in bed, having been very ill all night, delirious, and shrieking with pain referred to her back. I saw her about 1 P.M. after the bad night. She was then insensible, and evidently suffering much from pain in the back, with hot skin and furred tongue. Temperature 104° F. Considering the attack hysterical, I gave her tincture of valerian, sal volatile, and spirits of nitrous ether, twenty minims of each every four hours. At night the temperature was unchanged, but the patient was sensible, and complained of the globus, and frowned decidedly; the pain in the back was severe; there was no rheumatic odour, but some perspiration. I gave ten grains of Dover's powder. The patient slept well, and in the morning the temperature was normal, and but for soreness and weakness she felt fairly well. At 8 P.M. the pain returned, and the temperature again reached 104° F. Dover's powder was again given, and was followed by a good night and normal temperature in the morning, since which improvement has been maintained, and the patient is now fairly well, having had no further rise in temperature. Of course, the mitral condition is unchanged.

I am, Sir, yours faithfully,

Exeter, Feb. 28th, 1885. JAMES CREESE, L.R.C.P.L., &c.

Mr. Stephens.—Our correspondent was bound to attend to the order of the relieving officer, unless he had received special instructions to the contrary, in regard to these particular cases. Such being the case, he can recover his fee from the guardians by action in the county court, as, of course, they are answerable for the mistakes of their servants. As to the policy of so doing, that will, of course, depend upon the relationship of our correspondent with the guardians.

M.R.C.S.E., L.R.C.P.Edin. is referred to our advertising columns.

Dr. Tomkins.—In an early number.

UNUSUAL CAUSE OF CONSTIPATION.

To the Editor of THE LANCET.

SIR,—As I am not aware that absolute obstruction of the bowel from eating fresh figs has frequently occurred or been referred to, I think the following case may not be devoid of interest.

A short time since a boy of ten years of age was brought to me, his mother saying he was suffering from constipation of four days' duration. As the patient walked with difficulty, and complained of a good deal of pain about the anal region, I made a local examination, and found the anus loose and flabby, and occupied by a hard, dense mass of fig-pips, of which a good number were adherent about the buttocks. Finding it impossible to introduce an enema tube, I proceeded to remove the mass by scraping away with the fingers, the relaxed condition of the anus readily admitting two fingers, though the acute pain the patient suffered made it necessary to administer chloroform. I removed in this way half a pound (weighed) of fig-pips, besides many which were washed out afterwards by an enema. The whole lower bowel for several inches seemed quite paralysed by the distension to which it had been subjected. On the following day the patient seemed quite comfortable, and his bowels had acted. As I have heard nothing of him since, I presume he is well.

I am, Sir, yours truly,

Boshof, O.F.S., Jan. 26th, 1885. ARNOLD H. WATKINS, M.D.

A NEW FORM OF BLOTTING SHEET AND OF MEDICAL ADVERTISEMENT COMBINED.

THE following curious little handbill requires explanation:—

"*[Please use this Blotting Sheet.]*

"THE CITY OF LONDON MEDICAL AND SURGICAL ASSOCIATION.—An annual subscription of one guinea entitles a member to consult either of the medical officers at their consulting-rooms, which are situated in the heart of the City, whenever necessary. Full particulars of the Secretary, H. D. H. Charlton, Esq., Mansion House Chambers, 13, Size-lane, E.C."

Dr. Thos. Browne.—We have more than once expressed our abhorrence of the style of advertising referred to.

"THE ARABS WOUNDED IN THE SOUDAN."

To the Editor of THE LANCET.

SIR,—Mr. Allbutt's inquiry, "through the medium of your valuable journal, whether any provision is made for the surgical and medical treatment of the brave Arabs wounded in the battles in the Soudan," sounds a trifle comic, and akin to a stretch of the Exeter Hall sentimentalism. Our *confrères* in the Army Medical Department have, we should think, quite enough to do to minister to the wants of those who are legitimately under their care. Surely, it is too absurd to suppose or expect that they should bestow "the same humane treatment" on "the brave Arabs" as on "our own wounded soldiers." Cases have been reported by special correspondents of the London daily papers in which the "same humane treatment" was being attempted and practised by our surgeons on wounded "brave Arabs," with the result that attempts were made by way of thanks on the lives of the medical gentlemen aforesaid. I do not mean to assert that members of our profession should keep aloof from such of the wounded of the enemy as by chance come under their observation; on the contrary, they have in almost all campaigns stretched out a helping hand to them. But a suggestion that "provision" should be made for the wounded "brave Arabs" is surely impracticable.

I am, Sir, yours truly,

Feb. 24th, 1885. JOHN LUCAS, M.D.

AWARDS AT THE HEALTH EXHIBITION.

To the Editor of THE LANCET.

SIR,—By request of *Jury No. 9* of the late Health Exhibition we forwarded, at the commencement of last August, several filters, which the circular stated were "to be tested." They have just now been returned to us, and, to our astonishment, we find that they have not been tested, not a drop of water having ever been passed through them. You will understand that the nature of spongy iron renders it easy to affirm this with certainty. It appears almost unnecessary to point out that the only known way to test filters as to their sanitary merits consists in a chemical and microscopic comparison of water before and after filtration through them. Such testing can, indeed, have been the only reasonable object in retaining filters for almost seven months, extending far beyond the close of the Exhibition. Surely, nothing could show more clearly the hollowness of at least some of the awards by the jury. Will the committee or the jury allow this stigma to rest on them as a body, or will they name those who are responsible for the blunder?

I am, Sir, your most obedient servant

(For the Spongy Iron Filter Company),

March 3rd, 1885. T. G. L. MILLER, Manager.

A. D. (M——).—The letter was certainly not calumnious, but entered rather too minutely into personal characteristics.

APPLICATION OF MIDWIFERY FORCEPS.

To the Editor of THE LANCET.

SIR,—I beg to say, in reference to the correspondence of Mr. Lucas and Mr. Cartmel respecting an easy method of applying the forceps, that to overcome the difficulty in question, which has now and again been alluded to in your columns, I suggested some time ago to Messrs. Arnold and Son a modification of the instrument. I pointed out the desirability of having a hinge placed on the upper blade where it joins the handle. This would allow—first, the handle to be bent on the blade in an upward direction, as the concavity of the blade looks downwards; secondly, it would keep the instrument from the bed, thus allowing the axes of introduction to be varied at pleasure, and would afford a better lever for the nurse to hold, whilst her hand would be kept out of the way of the manipulator. The hinge by a simple mechanism could be fixed at any angle.

I am, Sir, yours faithfully,

Finsbury-park, N., Feb. 25th, 1885. JAMES MACMUNN.

THE LATE MR. CÆSAR HAWKINS.

To the Editor of THE LANCET.

SIR,—I have to thank your correspondent (see page 414) for the corrections concerning the necessarily brief sketch of the life of the late Mr. Cæsar Hawkins given in my Hunterian Oration. I shall gladly avail myself of them when the address is published. I say he was "partly" trained in the great Windmill-street School, because, as I mention, he was *also* "a pupil" at St. George's Hospital. Then, I do not say he lectured at the Windmill-street School "late in life," but "later"—that is, after he had been a student there. In other particulars I stand "corrected."

I am, Sir, yours obediently,

Savile-row, W., March 2nd, 1885. JOHN MARSHALL.

MEDICAL ETIQUETTE AT CRIEFF.

WE have a closely-written letter of eighteen pages from Dr. Thom, giving minutely his version of the cases in regard to which Dr. Gairdner complains of his behaviour. On two or three points his defence seems to us weak; but he shows that there is another side of the questions raised. Dr. Thom protests that he, too, takes Styrap's medical ethics for his guide, and he ends his letter by saying that he still considers it his duty to hand over to Dr. Gairdner any case he may see *for him* during his temporary absence from home. We are still of opinion that the matters in dispute should admit of friendly settlement, perhaps with the help of a mutual professional friend. The publication of such lengthy correspondence is out of the question.

Mr. G. Holifield.—R. Kimpton, 126, Wardour-street, W.

Dr. Milner Fothergill.—Yes.

ELECTRIC ILLUMINATION OF THE VARIOUS CAVITIES OF THE HUMAN BODY.

To the Editor of THE LANCET.

SIR,—In your report of the meeting of the Medical Society in your issue of the 28th ult. Dr. Gilbart Smith states that "the difficulty of warming the mirror was great when the electric lamp was used." I would suggest that the mirror be smeared carefully with glycerine, which prevents the condensation of breath upon its surface, does away with the necessity of warming, and, besides, has the advantage that the mirror may be kept in position as long as the patient will allow, the view remaining as clear at the end as it is at the commencement of its introduction. I am, Sir, yours faithfully,

Bicester, March 2nd, 1885. EDWARD COTTERELL.

Inquirens.—The simplest way is to send a visiting card with the old address marked out and the new one inserted. It should be sent under cover, and, of course, only to actual patients.

W. B. B. will find instances of the kind in the work of Cornil and Ranvier.

"THE ADMISSION OF PATIENTS SUFFERING FROM FITS TO ASYLUMS FOR IDIOTS."

To the Editor of THE LANCET.

SIR,—With reference to Dr. Cobbold's letter in your issue of the 28th ult. I beg to say that, of course, the proportion of epileptic patients would vary considerably at different times. However, as I wrote from memory, and my only object was to correct what appeared to me to be a misapprehension on your part, I am willing to substitute the term "a large number" for "majority."—I am, Sir, yours faithfully,

Brentwood, March 2nd, 1885. J. R. WHITE.

Dr. James Gairdner.—We regret we cannot comply with our correspondent's request.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Dyce Duckworth, London; Dr. Heywood Smith, London; Mr. G. Cowell, London; Professor Humphry, Cambridge; Dr. Cobbold, London; Dr. Bristowe, London; Surgeon-Major Sargent; Dr. H. G. Sutton, Sittingbourne; Mr. H. Russell, London; Mr. H. C. Willey, Sheffield; Mr. Paul, Liverpool; Mr. Crew, Nottingham; Dr. Bakewell, Christchurch, N.Z.; Dr. Campbell Morfit; Mr. C. H. Hough, Derby; Mr. Collings; Mr. A. H. Young, Manchester; Mr. T. P. Stephens, Emsworth; Mr. C. E. Humphreys, Llanfair; Messrs. Woollams, London; Mr. Ayres Moore, London; Dr. Illingworth, Clayton-le-Moors; Mr. E. J. Gairdner, London; Mr. Newman, London; Ada S. Ballin, London; Dr. T. Browne; Lady John Manners, London; Mr. E. Cotterill, Bicester; Dr. J. Gairdner, Crieff; Mr. J. Cheese, Exeter; Mr. J. G. L. Miller; Mr. A. H. Allen, Sheffield; Mr. F. Knight, Liverpool; Dr. Gayton; Mrs. Longshore Potts; Mr. M. R. Sett, Bombay; M. Besançon, Paris; Dr. Rohé, Baltimore; Dr. R. V. Baraix, Vienna; Messrs. T. and A. Constable, Edinburgh; Dr. Hale White, London; Dr. Aldridge, Southampton; Mr. J. R. White, Kelvedon; Mr. Hoey, Dublin; Dr. Suckling, Birmingham; Mr. J. Oliver, London; Mr. Braden, Lewes; Mr. Meadows, Hastings; Mr. W. F. Dale, Harrow; Dr. A. T. Keyt, Cincinnati; Dr. Radcliffe Crocker, London; Dr. Allchin, London; Mr. H. L. Pearson, Liverpool; Dr. Moore, London; Dr. Saundby, Birmingham; Mr. T. W. Thompson, Potter's Bar; Mr. Berry, Wigan; Mr. Vacher, Birkenhead; Dr. Wainewright, London; Dr. Thom, Crieff; Dr. J. J. McCarthy; Messrs. Doliber and Co., U.S.A.; Mr. Barrow, Notts; Mr. Ogilvie, Clerkenwell; Mrs. Phillips, Weston-super-Mare; Messrs. Burgoyne and Co., London; Mr. Lewers; Mr. Whitford; Messrs. Deane and Co., London; Mr. Tew, Bulwell; Mr. Gamgee, Birmingham; Dr. Woods, Southport; Mr. Collins, Ashford; Mr. Bourchier; Messrs. Street and Co., London; Messrs. Foster and Co., Brighton; Mr. Gurner, London; Messrs. Wood and Co., New York; Mr. Shapcott, Devonport; Messrs. Dawson Bros., Montreal; Messrs. Squire and Son, London; Mrs. Rahn, Ipswich; Dr. Biggs, Berlin; Mr. Scott, Edinburgh; Mrs. James, St. John's-wood; Mr. Kinder, Leicester; Mr. Armstrong, Manchester; Mr. Marr, Aberdeen; Mr. Edwards, Chester; Mr. Willison; Mr. Lee, Notts; Major Ormond; Mr. Brooks, Hull; Mr. Jeffrey, Eastbourne; Mr. Horne, Bath; Messrs. Evans and Co., Liverpool; Messrs. Macmillan and Co., London; Dr. Eberle, Thirsk; Messrs. Smith, Elder, and Co., London; Mr. Terry, Camberwell; Mr. Walsh, Quebec; Mr. Dickenson, Bow; Messrs. Bell and Co., Edinburgh. Surgeon E. H. Saunders; Mr. Blyth; Mr. Kershaw, Eastbourne; Mr. T. G. Evans; Mr. J. H. Keeling, Sheffield; M.R.C.S.; Inquirens; M.D.; Ajax; J. H. G.; W. A. G.; X.; An Irish Graduate; R. P., Dudley; J. B. S., Paris; A. C.; Medicus, Camberwell; Richmond; W.V.R.; Corpuscle.

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